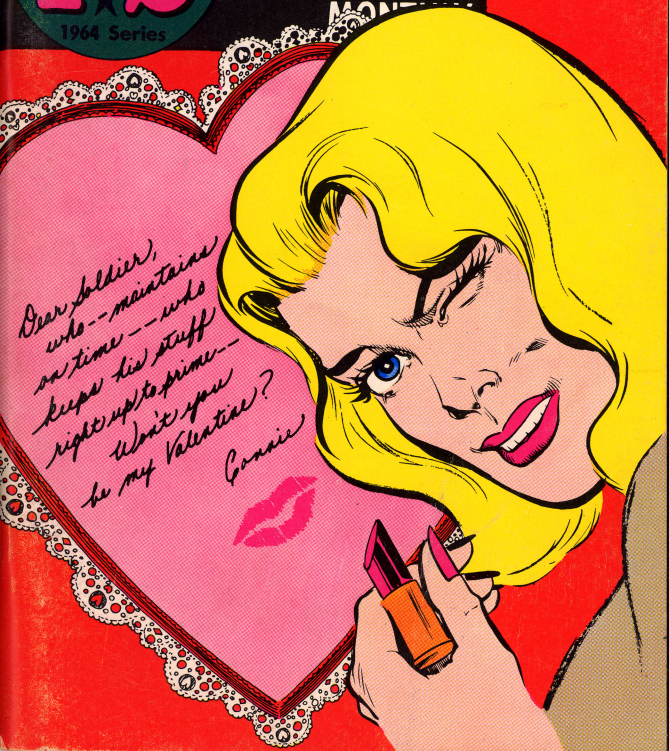


Issue 135

PS

1964 Series

THE
PREVENTIVE
MAINTENANCE
MONTHLY



Dear soldier,
who--maintains
on time--who
keeps his stuff
right up to prime--
Won't you
be my Valentine?
Gonnaie

The INGREDIENTS OF

If you ever get to palavering with the baker in the mess hall and ask him how he's able to turn out those good cakes, he'll probably tell you that the secret's in the ingredients. (And if he's an honest sort of guy, he'll allow as how **he** has something to do with it.)

One dictionary gives this definition of ingredients: "Any of the things that a mixture is made of."

And preventive maintenance sure is a mixture of ingredients: **People, Parts, Manuals, Tools, Time** and **Training**.

Leaving out one ingredient doesn't do the preventive maintenance picture any real good—no matter how much spit 'n polish "frosting" your equipment might have.

How do each of the ingredients fit into your preventive maintenance scheme of things? Well . . .

1. People—

You've got to have the right ones in the right job.



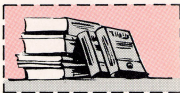
2. Parts—

They're needed if you're going to keep your equipment up to snuff.



3. Pubs—

You can't tell who's where without a program, and your maintenance and supply manuals—the right ones and the latest ones—are your sure bet to what goes where and how.



4. Tools—

You can't put the parts, components and what have you where they belong and perform maintenance without them.



5. Time—

Without it, all else goes whistling . . . maintenance is a mission function, too, and it takes its place in the sun . . . and the schedule.



6. Training—

On the job, this is something that is always going on. You're never too old to learn . . . and you never know so much that you can't learn some more.



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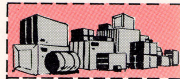
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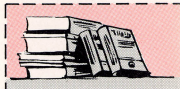
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READINESS

UNLIKE A CAKE, PREVENTIVE MAINTENANCE ISN'T HERE TODAY AND GONE IN A FEW MINUTES. IT'S A CONTINUING THING—MAYBE FLOPPING A TOLERABLE BIT ONCE IN A BLUE MOON BECAUSE OF SOMETHING OUT OF YOUR CONTROL . . . BUT, MOST OF THE TIME RISING BECAUSE YOU KNOW THE IMPORTANCE AND USE OF THE INGREDIENTS.



PS

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Issue No. 135 1964 Series

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M17 Mask	57	Publications	56
Tool Care	58-59	Supply 11, 12, 15, 16,	
Control Your Tools	59-64	23, 25, 38, 41, 43	



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PS Magazine,
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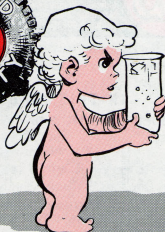


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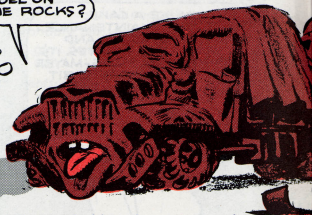
Sgt. Half-Mast,
PS Magazine,
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KEEP YOUR FUEL...



"HIC"
FUEL ON
THE ROCKS?

HIGH



You ever been around a stalled vehicle that had a gas line freeze-up? If so, you probably heard the driver mutter, under his breath, @#\$%&*@#\$. Roughly translated, this means he forgot to keep his gas tank filled high—and his gas dry (free of water).

Yessir, gas line freeze-ups can be mighty irritating. The only way to steer clear of 'em is to apply some new words to an old principle: a pint of prevention is worth a gallon of cure.

INSTANT FROSTBITE

While we're on the subject of prevention, you come first. Since fuel and the alcohol you may add to it both evaporate quickly, anything coming in to direct contact with 'em will chill



rapidly. If it happens to be bare skin, you'll see one of the quickest, severe cases of frostbite on record.

Winter clothing is no protection either, since fuel soaked clothing loses its ability to insulate you from the cold . . . and becomes a fire hazard, besides. Change clothes immediately if you spill either fuel or lubricants on them. But even immediately may not be fast enough to prevent frostbite. The only sure way is to use caution in handling all fluids.

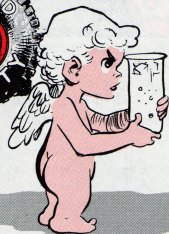
FILL YOUR TANKS

The big trouble-maker that adds water to your gas is **condensation**. You get it in every type of storage—underground, 55-gallon drums, 5-gallon cans . . . even in your vehicle gas tank.

So, if you leave your vehicle at the end of the day without filling 'er up you've a big air space in your tank. And, sure as shootin', when she's parked outside and the temp drops overnight, the moisture in the air in there's going to condense into droplets of water. Then you're in for it—ice crystals in the gas which clog the fuel lines!



KEEP YOUR FUEL...



"HIC -
FUEL ON THE
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HIGH

AND

DRY

FILL IT UP,
ALL THE WAY,
BUSTER,
ALL THE WAY!!



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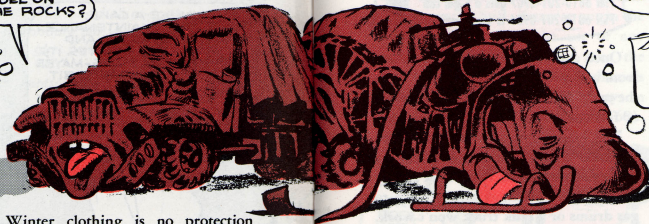
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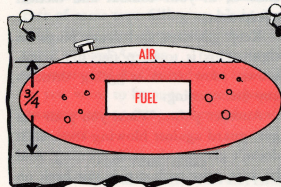
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So refuel your equipment often to keep the gas tank's air volume low. The more fuel and less air volume in the tank the less condensation you'll get. So try to keep the tank close to $\frac{3}{4}$ full as much as possible.

That's the reason why you want to eliminate that air space in the tank by filling 'er up at the end of the day's operation, too.



USE WINTER GRADE

'Course what grade of fuel you use can make a difference in whether your baby will even start for you. A winter grade gas is the one you want. But if you get your fuel from the POL likely as not they'll be serving the proper grade.

When using arctic automotive gas (Mil-G-3056B type II) avoid getting the gas too warm or hot. When the gas is brought into a warm shop or build-



ing it warms up and loses its arctic qualities; then the gas will act like regular gas. The first sign of this can be hard starting even when the engine is warm but below operating temperature.

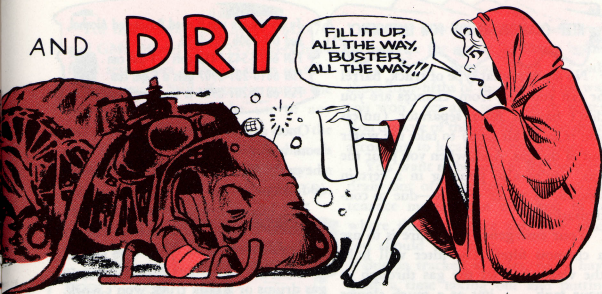
The same principle goes for diesel fuel. You want to use winter grade, VV-F-800, DF-A, so the wax in this fuel won't clog the fuel filters and lines.

If you fuel from drums or cans, you want to check the labeling for the right grade.

AND

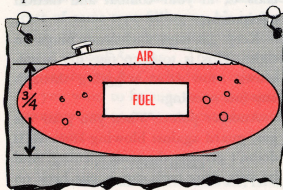
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ALL THE WAY,
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KEEP CHAMOIS HANDY FOR EMERGENCY

No matter what type of truck, barrel or can you fuel from, chances are you don't have a filter separator (unless you're in an air unit) to take the water out of the gas. And, when you pour the gas, you're also pouring in a certain amount of water with it—due to condensation.

Your emergency procedure is to use a chamois filter. The filter will hold the water and let the gas through to your tank . . . but at a much slower than normal refueling rate. So whatever you can do to keep fuel free of water during handling will help keep the use of a chamois cloth to a minimum.

If you must strain your fuel through a chamois skin or other type strainer to remove water, be certain you drain off all the static electricity by grounding the strainer to the vehicle . . . and the vehicle to the ground. Otherwise you're risking trouble.



To guard against this water freezing in your vehicle's fuel system during extreme cold weather, you can do this. Dump one-half pint of Grade III denatured alcohol, for every 10 gallons of gas, into the tank before you add the gas. TM 9-207 (17 Sep 59), page 37, or TB ENG 347 (4 Dec 59), page 4, is your authority.

To do the job you'll need Denatured Alcohol, Fed O-E-760b, Grade III.

FSN 6810-543-7415 gets a 1-gal can

FSN 6810-201-0907 gets a 5-gal can

FSN 6810-201-0904 is worth a 55-gal drum.

Once a month, drain off anywhere from a quart to a gallon of fuel from the tank. This will get rid of any water or foreign matter that may be present.

The biggest mistake is made when a rookie tries to take a short cut by adding alcohol direct to his bulk supply of gasoline. Adding alcohol direct to gas drums or a tank truck won't work. The alcohol must go into your equipment's gas tank just before you gas up.



As for the gasoline itself, try to use nothing lower than 88 octane grade, class C, in your combat and tactical equipment.

Keep gas caps and drum plugs on tight. This is to keep fine dry wind-blown snow from wiggling through any fine opening.

Another point. When you pour the gas, guard against blowing snow so it doesn't get into the tank opening. And be sure your tank cap is put back on tight.



GIVE BIRD JUICE BIG EYE



Of course if you're in an air unit and you get water or other contaminants in your Av Gas or JP-4, you can't very well pull over to the side of the road and thaw out the fuel lines! Your fuel has to go into the bird clean.

For this reason your M49C, M217C and GMC Model HC 453 tankers have filter separators right on them to take out the water. Still, if you're out in the field and don't have the use of any mechanical filter, you can take the water out by using the old chamois cloth in an emergency, like it says in para 24p(3) of TM 10-1107 (Feb 60).



One other point about contamination of bird juice. With only one grade of Av Gas (115/145) you don't have as much possibility of contamination as you did when handling all the lower grades. But there has been at least one case of some type filling up his tanker with JP-4, and then using the same truck to haul Av Gas . . . naturally the contaminated Av Gas had to be rejected. So you want to be sure to use separate transporters, or compartments, for each type juice.

TAP YOUR TANKS

Whether your vehicle is an air, land, or sea type, almost all of them have either drain petcocks or plugs on the bottom of the fuel tanks . . . and for a very good reason.

Water being heavier than fuel, it naturally settles to the bottom of every tank—it'll take a little longer with JP-4 and diesel fuel, but she'll settle.

So after moving drums of fuel, leave them settle for about 24 hours before using any of the gas. Then use only about four-fifths of the drum. This way you won't get any sediment or water. You dispose of the last fifth in the drum according to local POL regulations.

You want to be sure to let the water drain out of your tanks. Your maintenance manual can clue you in on where the drains are and how often you should use them.

But on tracked vehicles, you'd have quite a time taking out and putting back drain plugs in filler tanks. So you drain water from the fuel filter instead—at least daily. And don't forget the primer and heater filters, too. If you need to take water out of the fuel tanks directly, then use a hand pump to reach the bottom of each tank on tracked vehicles.



The same water tapping applies to fuel in storage. TM 10-1101 (14 Sep 55) "Petroleum Handling Operations," can fill you in on the many points involved in the handling and storing of fuel.

So-o-o . . . no matter where or when you come in contact with fuel, you'll accomplish your mission, when you keep your gas tanks high and dry.

SAVE THE INSTRUCTIONS



Many winterization and heater kits for tactical vehicles have their instructions packed right in the kit. The instructions usually have schematics, diagrams, photos, data, etc., for the installation, operation and maintenance of that specific piece of winterization equipment.

The big news here is that these instructions are not replaceable through the Army publication supply system. You get one set with the kit and it's intended to stay with that kit for keeps.

After you've made an installation, keep the operating and maintenance instructions handy for day-to-day use.

Put the installation portion in a safe place . . . don't throw them away. When it comes time to remove the winterization equipment you may need the installation portion again to help you along.

When you're repacking the kit for the next season, one of the items that's got to go into the package is the complete set of instructions. Do this and the next guy that gets the kit won't be left in the dark.

If your instructions do get soiled or lost, see the TB 9-2855-series technical bulletins. They also cover general, installation and operating instructions.

DID YOU GET YOURS?

A MIGHTY IMPORTANT CHANGE FOR THE CLUTCH AND FLYWHEEL-AND MAYBE FOR YOU IS IN CHANGE 1 (3 JUL63) TO THIS TM.



TM 9-2320-206-12

There are many 10-ton M123 and M125 truck operator manuals being used without a real important change. Every TM 9-2320-206-12 should have a Change 1 (3 Jul 63) tucked inside its cover. Initial distribution may not have given your outfit enough to go around but don't let that stop you; get one and go over it before you get behind the wheel of your 10-ton job again. This change covers driving cautions and procedures—that'll keep the clutch and flywheel from disintegrating and come flying up into the cab. In a nutshell, keep your RPM under 2600.

M35A1 CLUTCH CONSERVER

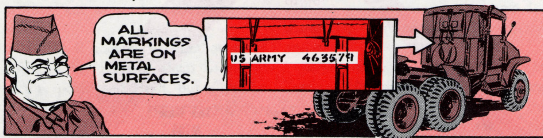


The clutch on your M35A1 2½-ton (multifuel) truck is plenty strong enough if you use it right . . . but, it won't take beating up.

It'll fail after very little use if you make a habit of starting out in second gear.

So, naturally, since you're a good driver you start off in first gear under any and all conditions in moving forward. That's the only way you can make sure your clutch'll live out its normal life span.

TRUCK TRACTOR MARKINGS



Dear Half-Mast,

The sketch in AR 746-2300-1, page 55 shows the truck tractor's registration number and US ARMY stenciled on the back of the cab. The only similar place to stencil this information on the M221 truck tractor is on the cab canvas. Doesn't this seem contrary to proper care and maintenance of canvas?

Sgt K. L. S.

Dear Sergeant K. L. S.,

You're right. Stencil markings do not belong on canvas.

Fig B, page 55 in AR 746-2300-1 does show the markings on the cab's rear . . . which is metal. If you look over the AR sketches you'll notice that all markings are on metal surfaces. This indi-

cates that all markings will be on a metal surface.

The markings on your M221 truck tractor should go below the canvas or appropriate rear metal surface of the cab just like paragraph 9b(3b) of the AR says.

Half-Mast

DON'T GET X-ED

If you've got a 1½-ton cargo trailer with an "X" on its identification plate, forget it's there.

That "X" got dropped long ago, so you might as well drop it, too.

To keep your trailers
and their pubs
(TM's, TB's,
MWO's)

The "XM's" were made a straight "M" by OCTM 34794 back in 1954.

The new trailer "M" designations and their OCTM number are now in SB 9-122 (Oct 61).

up to
date, keep
track of your
1½-ton jobs like so—

The Old	And	The New
XM104		M104
XM104E1		M104A1
XM105		M105
XM105E3		M105A1

M38 TRUCK

You a little confused about how to position the trailer light cable receptacle cover on your M38 or M38A1 ¼-ton truck?

Well, it's all spelled out in the Change 3 (Jun 58) to TM 9-8014 (Apr 55). TB 9-804-9 (May 53) called for

it to be done a different way but the latest word is that the spring will be vertical and to the left.

If your M38 or M38A1 ¼-ton has it any other way, have it changed. No sense getting giggled on a thing like that when it's so easy to prevent.

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WIPER TALK



So you've replaced a bad wiper arm on one of your commercial trucks or sedans? Or maybe just the wiper blade got replaced.

Hold on . . . before you go strong-arming 'em to see how they work—think.

Natch, if they're vacuum operated you can hand-power them to see if they're positioned right, but if you've got an electrically actuated wiper—look out!

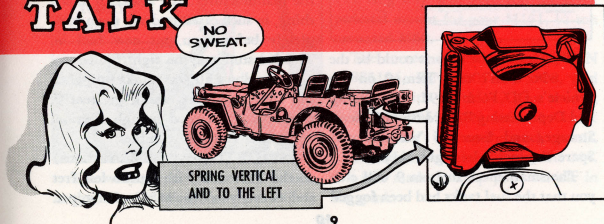
Moving 'em by hand (instead of by

power) will only damage the nylon type pinion gear in some units or do dirt to the linkages or belts. Always use the juice for the test.

Another thing that can raise heck with the system is running 'em on a dry windshield—this puts a big load on the unit.

If you're lucky enough to have a new vehicle with overlapping blades, be sure you always mount them the same way they were before taking 'em off. If you don't, they'll fight each other.

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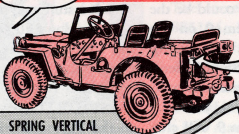
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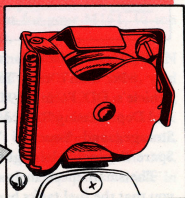
TALK



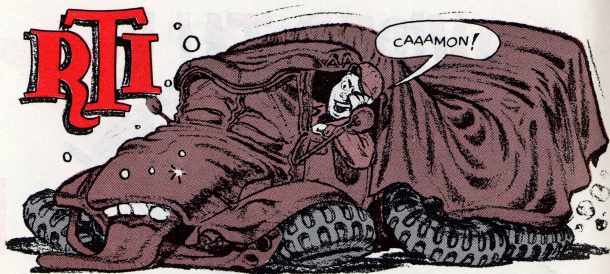
NO SWEAT.



SPRING VERTICAL
AND TO THE LEFT



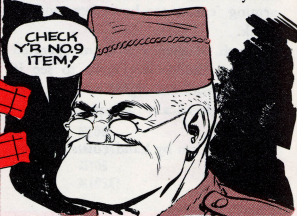
RTI



So you just got a freshly deprocessed wheeled or tracked vehicle—and the critter keeps dying on you? What gives?

with PE 2 preservative oil. And it means that you have to fill the tank full to dilute the PE 2 so it won't clog up the engine's fuel system.

Some fuel tanks still may have some fuel in them from the time they left



It's possible the culprit could be the guy who didn't read Item 9 on the vehicle's DD Form 1397, "Processing and Deprocessing Record for Shipment, Storage, and Issue of Vehicles and Spare Engines." It might be you.

The small check in Item 9 will clue you that the fuel tanks had been fogged

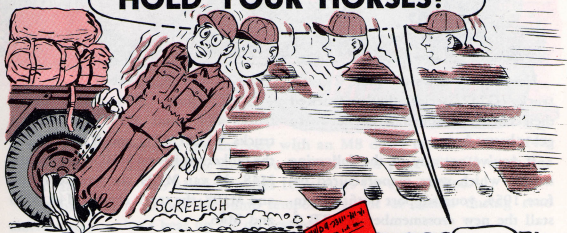
the manufacturer. It's always a smart thing, in such cases, to drain them completely before you put new fuel in. The old stuff may be right fouled up.

If you don't fill your tanks full when the 1397 tag has a check in Item 9, you won't get a good enough dilution, and you'll run into troubles.

So-o-o, RTI (read the instructions) on the 1397 and with mucho less fret and sweat, you'll have a real live pet.

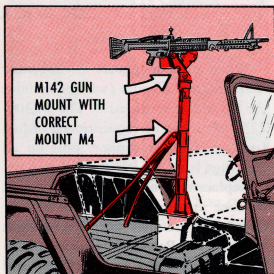
BEFORE YOU MAKESHIFT MOUNT
THE M60 MACHINE GUN...

HOLD YOUR HORSES!



There's been a lot of makeshift mounting of the M60 MG in the M151 ¼-ton truck using the old M31C pedestal gun mount—some good, some bad.

There's even been some scuttlebutt about an MWO in the works to show you how to secure the M31C to prevent it from tearing up the truck chassis. Don't believe it!



The word, from the horse's mouth, is that the M31C mount is definitely



out. In fact, MWO 9-2320-219-20/11 (12 Aug 63) will give you the right pedestal mount for your M151, ¼-ton mounted M60.

The correct mount is the M4, P/N 10885124, FSN 1005-064-5808, and it's used with the M142 gun mount, P/N 10900945, FSN 1005-854-4463. The M4 won't tear up the truck chassis.

So, saddle your bronc with the M4.

It's just made to keep your vehicle in the pink.

MY
ACHIN'?

CRACKED CROSSMEMBER



Here's good news for those 2½-ton trucks (G742 series) that've cracked their No. 2 crossmember. They're to get a better brace.

If you've got any of the following trucks, which were manufactured before 1954, your support outfit can install the new crossmember per TB 9-

2320-209-40/1 (15 Feb 63):

Cargo trucks M34, M35, dump trucks M47 and M59, maintenance trucks V17A/MTQ and V18A/MTQ, the tankers M49 and M50, truck tractor M48, the van M109, the wreckers M60 and M108, the truck chassis M44, M45 and M46.

STOCKAGE LIST CHANGE

Dear Half-Mast,

We just received our copy of TM 9-2300-223-20P, Consolidated Authorized Organizational Stockage List of Repair Parts for Tank Automotive Materiel, dated Nov 62 and it indicates that distributors are no longer an item of authorized stockage.

The old copy of the TM dated Mar 62, listed the distributors on pages 62, 63 and 64; the new TM doesn't show them at all.

Should we turn in the distributors we now have on the shelf which the old TM authorized?

SFC G. H. E.

Dear Sergeant G. H. E.,

Yes.

The distributors are no longer an authorized stockage item at organizational level. They're now going into the -34P TM.

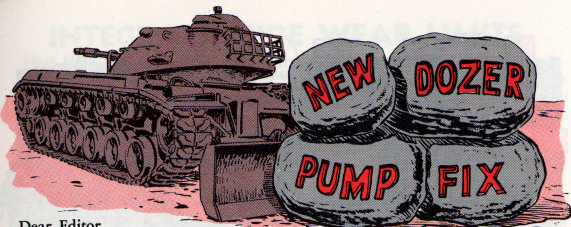
BUT ALL IS NOT LOST;
YOUR BASIC VEHICLE -20P OR
ORD 7 MANUALS STILL
AUTHORIZE YOU TO REMOVE
AND REPLACE DISTRIBUTOR
ASSEMBLIES.



When an item appears in your basic -20P or Ord 7 manual (with or without the *) and is not listed in TM 9-2300-223-20P, it can be requisitioned or had from your direct support unit on an exchange basis for immediate use only.

Replacement of a distributor should be done as a last resort; most of your distributor troubles can be put right by using the Parts Kit; ignition distributor, that's listed on pages 157 and 158 of TM 9-2300-223-20P (Nov 62).

Half-Mast



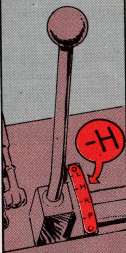
Dear Editor,

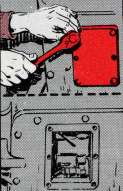
This fix will save time for anybody with an M8 dozer mounted on a M48, 48A1 or M48C tank. The fix you gave in PS 119 on page 38 will work fine but it takes nearly two hours vs about 10 minutes for our method.

The problem is to put the pump temporarily out of action during road marches so you don't heat up the oil reservoir.

You can take out the prop shaft like you say, but our way is slicker and quicker. Here it is by the numbers—

- 1** Shift hand pump control lever into H (hold) position.

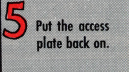

- 2** Using a 9/16" socket wrench, take the upper



access plate off the oil reservoir at the back of the tank.
- 3** With a pair of pliers, pull the cotter key out of the pin in the control valve arm and then remove the pin and washer.


- 4** Wrap the pin, washer and key in a piece of paper and store it in the oddments tray.


- 5** Put the access plate back on.



That's all there is to it. You can get your dozer into action and out of action without spending nearly half a day messing with the prop shaft.

Maj D. Mason
Armor School
Ft. Knox, Ky.

(Ed Note—Great idea, Sir. The design boys are working on a way to eliminate this problem entirely but for now your fix is the best in view.)

IDLE TALK

...IF MY TOE TURNS BLUE...WE GET OUT AND IDLE 'ER.



Not one bit!

Not when the final result is the answer you've been looking for on starting up your M114 recon carrier on these cold, cold mornings.

The trick lies in the proper fast idle adjustment on your 114's carburetor. If you're way off on this adjustment, Mother Nature will make life miserable for you when the frost is on the pumpkin and the only way out is to correct that adjustment just right.

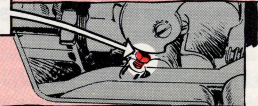
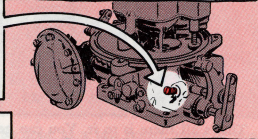
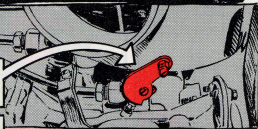
HERE'S THE WAY TO GO ABOUT IT.

First, shove the choke in all the way so the carburetor's fully open.

Then, get your engine idled up to 650 RPM (this'll be your "idle" setting) by turning the throttle stop screw in or out till she's right on the button. You'll be needin' the electrical tachometer (FSN 4910-395-1996) that's in your No. 2 Common Tool Kit for the RPM setting job.

Finally, adjust the fast idle screw 'till there's exactly a .010-in clearance between the screw head and the fast idle cam on the choke lever.

Doing it just like this oughta make those cold morning starts a wee bit more cheerful . . . try it.



INTEGRAL GUIDE WEAR LIMITS

Dear Half-Mast,

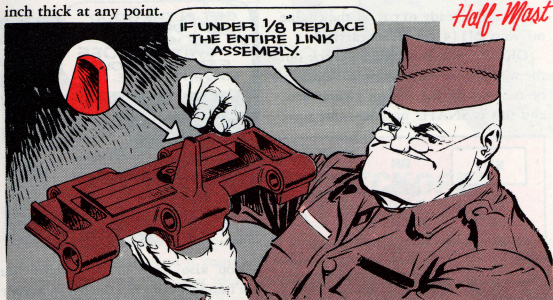
What are the wear limits on the integral guide for the track used on the M41 and other members of the light tank family? In the old TM 9-2630-200-14 (Aug 58) on page 46 and in the new one (Oct 62) on page 57 it says one-eighth inch—that doesn't sound like very much. Is that all they can wear down?

Cpl J. R. K.

Dear Corporal J. R. K.,

You are so right . . . what is meant is that the link will not be replaced until the integral guide is worn down so that it is less than an eighth of an inch thick at any point.

The new TM 9-2630-200-14 (Oct 62) makes this plain on page 95 under line item (3)—“Center guide wear remaining thickness, $\frac{1}{8}$ inch.”



NOSEY LUG



TB-TELLS SUPPORT TO GRIND LUG OFF

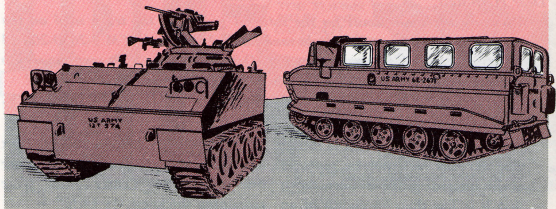
For M113 PC keepers—

Anytime your favorite M113 Personnel Carrier's due a replacement engine (Chrysler Model 75M, FSN 2805-679-9668), best check ahead of time to make sure the engine number's been checked against TB 9-2805-216-35/1 (28 Mar 63).

The TB tells support to grind off a cast lug on the cylinder block; otherwise the lug'll interfere with proper alinement of the starter.

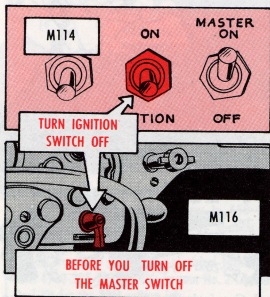
The TB lists a couple of pages of engine (and engine container) serial numbers.

WITCHEE SWITCHEE



So you're ready to cut off the engine on your M114 or M116 carrier?

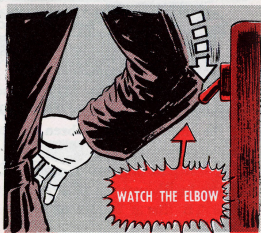
OK, but take a second to check out the way you've been doing it. You may be turning off the master switch first, and this is SNAFU practice—for sure.



If you flick the master switch first, the engine's still running . . . which means your 100-amp alternator is still shooting out juice. This can knock out the master switch on the M116 and cause the rectifier and regulator on both vehicles to go kaput.



You also have to be careful you don't accidentally flip the M114 master switch to OFF with your elbow during operation.





CHECK 'EM OFF—
WRITE 'EM IN...

“OPERATION CHECKOFF”

MESSAGE TO ALL AIR TYPES

“Operation Checkoff” is part of an Army-wide effort to reduce the size of aircraft checklists—and it starts the minute you read this.

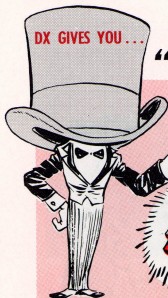
Its purpose is to get your ideas down on paper on which inspection items to eliminate from each aircraft’s checklist or-r-r . . . which items can safely be moved from daily to intermediate or from intermediate to periodic inspection status.

Based on experience, you know which items you worry about and which ones you ignore on preflight or maintenance checkoffs. So pass your recommendations on to me by addressing ‘em to:

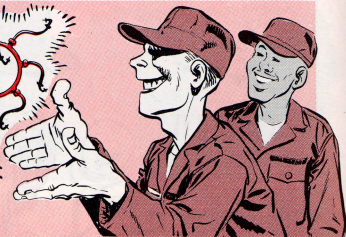
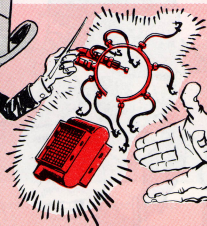
Windy Windsock
PS Magazine
Fort Knox, Kentucky 40121

I hope you won’t be looking for an on-the-spot checkoff clearance, because I’m expecting heavy inbound traffic. Please don’t feel ignored if I just tell you I got your letter and thank you. As the old trail boss said: “Write ‘em up! Mail ‘em out!”

Windy

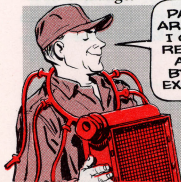


"INSTANT PARTS"



The direct exchange part supply system is just about the best set up that's come along since the advent of instant coffee. Almost any driver will tell you he's been able to keep his vehicle rolling with "instant parts" (swapping bad parts for good ones).

You air types should also be able to help keep your birds off the deadline list since Change 5 (15 Aug 62) to AR 711-16, "Installation Stock Control and Supply Procedures," came off the press. Para 70 of the AR gives you the green light to get recoverable air items by direct exchange.



PARA 70 OF
AR 711-16 SAYS
I CAN GET
RECOVERABLE
AIR ITEMS
BY DIRECT
EXCHANGE.

But before you dash over to supply for a replacement starter, fuel pump, carburetor, generator, distributor—or

what have you—there're a couple of pointers to keep in mind.

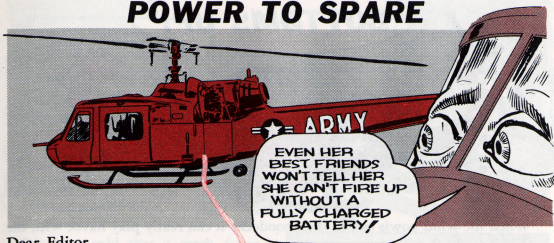
First off, you want to be sure which part is shot. You can do this by trouble shooting your bird. Substituting one part after another trying to correct a faulty engine can waste a lot of time, not to mention the extra elbow grease.

Next, check the selected items list in your outfit to see if you can direct exchange it. If the part is on the list you're in business.

Finally, check the -20P on your bird to find out what the basic part has on it. You want to take off all the accessory parts such as covers, hoses, clamps, and fittings, so they can be put on the new part. After all, you don't want to wind up on the short end like one mechanic who turned in the radiator of his M38A1 Jeep, with the drain cock and filler cap still on it! When he drew the replacement he got the radiator, minus the drain cock and filler cap.

Yessir, "instant parts" have worked wonders for ground equipment. They should do no less for air equipment.

POWER TO SPARE



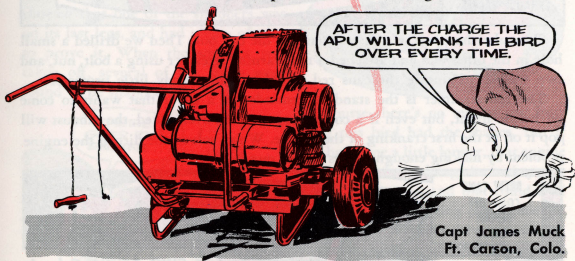
Dear Editor,

There's been some scuttlebutt about the APU in the organizational maintenance A Supplemental, B and C tool kits not having enough punch to crank up some of the Army's big birds.

Our experience with the Huey (UH-1A), however, has shown us that there's only a starting problem when you let the nickel cadmium battery run down.

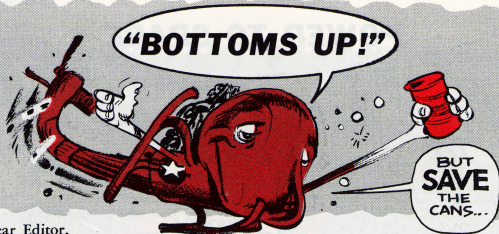
The battery packs a real wallop when it's fully charged. But it can lose some of its punch overnight. And if the bird isn't flown for some time, or a lot of juice is used during ground checks, it's a sure bet the battery won't be up to snuff.

We found that the answer to keeping a fully charged battery is really quite simple. Every morning, before a bird is scheduled to fly, we turn on the battery switch, plug in the APU, and charge the battery for five minutes. These batteries are built to take it, so there's no problem with fast charges.



Capt James Muck
Ft. Carson, Colo.

(Ed Note—AVSCOM doesn't have any immediate plans to come out with a bigger APU, so keeping the battery fully charged seems like a good deal.)

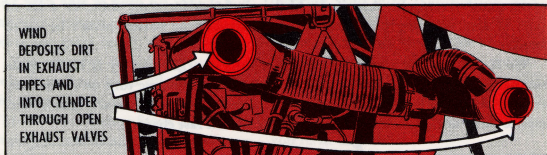


Dear Editor,

When the wind howls out in the boondocks it can really play havoc with the innards of a bird engine.

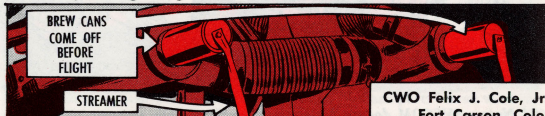
She whips up the dirt and deposits it in the engine exhaust pipes of our Ravens (OH-23) and, with an exhaust valve open, right into the cylinder.

Of course, no self-respecting bird can digest this stuff for long without ending up deadlined. So, over a brew or two, we got to thinking that maybe we had the solution right in our hands. The brew can looked like about the right size for the exhaust pipe! And it turned out to be a perfect fit.



To make the cover we cut one end of the can out. Then we drilled a small hole in the other end and attached a red warning streamer using a bolt, nut, and two washers. Painting the cans red completed this dandy little protector.

The red streamer is the standard reminder of a cover that wants to come off before flight, but even if a cover happens to be overlooked, the exhaust will pop it off at the first cranking of the engine. We've solved the dirt in the engine problem by making enough covers for all our Ravens.



CWO Felix J. Cole, Jr.
Fort Carson, Colo.

(Ed Note—Cheers! Skål! Salute! A Votre santé! Próst! You can't beat this price for covers.)

**EYE 'ER-
TRY 'ER!**

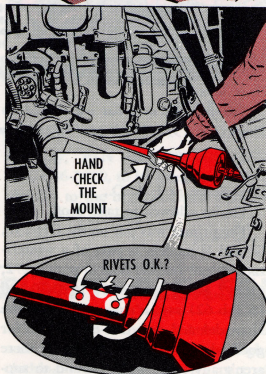
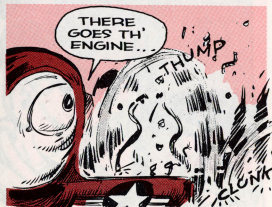
COME, FLY
AWAY WITH
ME LOVE BIRD!

BUT EUSTACE,
YOU DON'T KNOW
ANYTHING ABOUT
ME.

It's been said that a mech doesn't really get into his work until he gets his hands dirty.

The same thoroughness principle should be used by a mech when he makes his rounds on a Daily inspection. After all, how's he going to know if the bird is fit to fly if he eyes 'er—but doesn't try 'er?

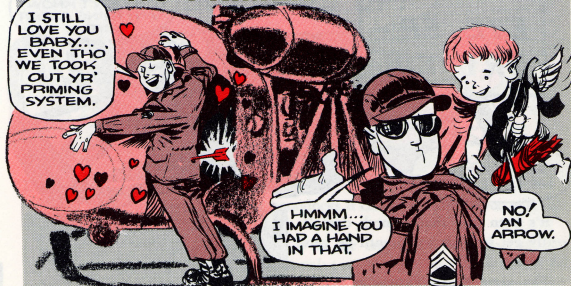
Take the case of a Raven (OH-23C) that went back to support for ironing out of a vertical. After the cause of the vibration was found and corrected, a hand check of the engine mount also showed that one of the snubbers was on its last legs, and had plenty of play to prove it. When the snubber was taken off, several of the rivets were found to be snapped off.



'Course there's no telling just how long this bird had the shakes. But if she had gone a little longer, that engine might have been doing the turkey trot on its mount . . . and that could lead to all sorts of revolting developments!

So, when you Daily the engine frame, mounts, and snubbers for damage and security, make with the muscle power as well as the eyeball power. That goes double when a bird's been out of sorts.

NO PRIMER NEEDED



Dear Windy,

Can you tell us what we should do with the engine priming system on our Sioux (OH-13) when it goes on the bum and we can't get parts for it?

SSgt J. A. O.

Dear Sergeant J. A. O.,

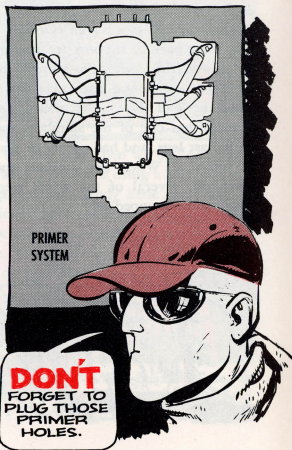
You're allowed to take it off.

The primer was put on the OH-13E, G, and H models as part of a winterization deal. But the note in para 4-172, Chap 2, Sect IV of TM 55-1520-204-20 (6 Feb 62) says it's not needed on the H model and you can take it off for good when it acts up. That's why there aren't any spare parts around to support the primer.

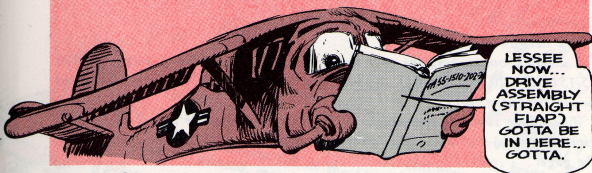
The same deal goes for the E and G models. The authority for taking the primer off is, again, your organizational maintenance manual—Chap 2, Sect X, para 10-64.

When you actually make with the wrenches, though, be sure you plug all the primer fitting holes in the manifold and carburetor.

Windy



THE STRAIGHT POOP



Dear Windy,

We haven't been able to identify the drive assembly (straight flap) listed in paragraph 5f of TB AVN 23-65 (12 Dec 62), "Aircraft Condition Components Requiring Historical Data."

Our Bird Dog (0-1) TM 55-1510-202-20P doesn't list any such animal. Can you identify it?

Sp-6 R. W. S.

Dear Specialist R. W. S.,

The drive assembly was put on the TO-1D model only, by MWO 55-1510-202-34/2 (17 Apr 61). All of the instrument trainers should have been modified by now, so look for the drive

assembly, P/N 03-00090-000, FSN 1680-086-7870, to be listed in a future revision to the organizational maintenance parts manual.

Windy

UNPLUG THAT HELMET - PLEASE!



That APH-5 flying helmet you're wearing isn't just a part of your flight clothing. You might say it's part of your aircraft's commo system, too.

So, puh-leez remember to pull the jack by hand before you try to yank your helmet out the door after shutting down. Your headset cord is just as delicate as any other piece of wiring.

Besides, if it happens to be an airborne bailout situation, a habit of forgetting to unplug the jack can be a bit inconvenient when you're in a hurry, panic-type.

IDLE ANGLE

Dear Windy,

I've been throttled!

Talking about making the gage shown in Figure 3-10, Chap 2, Sect III of TM 55-1510-202-20 (19 Apr 61), to check the carburetor idle mixture adjustment on our Bird Dog (0-1).

The figure shows a gage angle of 28 degrees while the actual adjustment given in para 3-46f talks about a throttle shaft angle of 35 degrees, when using the gage.

To top this off, an old carburetor pub shows the gage made to an angle of 35 degrees.

So what angle should I put on the gage, 28 degrees or 35 degrees?

Sgt H. R. W.



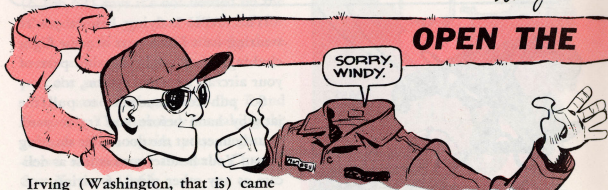
Dear Sergeant H. R. W.,

The 0-470-7 engine carburetor in the long gone L-17 used to take a throttle shaft angle of 35 degrees.

But the carburetor in the Bird Dog 0-470-11, -11A, and -15 engine uses the 28 degree angle shown in Fig 3-10.

So keep an eyeball peeled for a revision to para 3-46f of your maintenance pub, taking out the 35 degree angle poop.

Windy



Irving (Washington, that is) came up with a story about "Ichabod and the Headless Horseman."

Maybe you're no author, but you can right a wrong if the people in your outfit are working around Seminoles

(U-8D) without taking a real simple precaution.

All you have to get them to do is make sure the front baggage compartment is open when they're working

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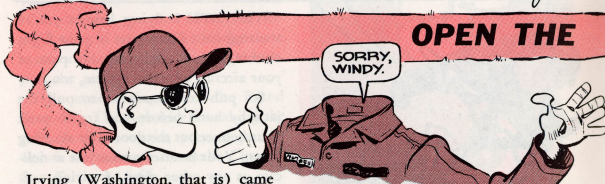
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Windy

OPEN THE



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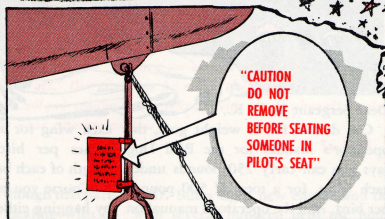
All you have to get them to do is make sure the front baggage compartment is open when they're working

TIPSY BIRD



when you move 'er around in the maintenance area, we made up this sign and attached it to the tail stand.

Now, when a recruit comes into the outfit, he's aware of the bird's tipsy character at a glance.



The Ground Crew
Ft. Monmouth, N. J.

(Ed Note—A good reminder about the bird's delicate center of gravity.)

DOOR, LOUIE

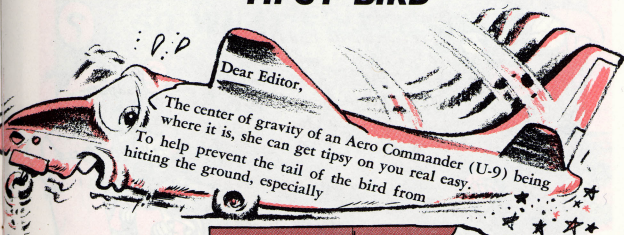


around either engine. When the door is open, the starter circuit is deactivated. And that means nobody's going to climb into the cockpit and accidentally start the engines.

It sure beats having a story making the rounds of your unit—a story called "Joe—the Headless Mechanic," and written by "I. M. Forgetful."

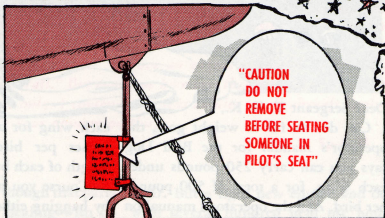
And don't forget that a "hot" mag is still a possibility.

TIPSY BIRD



when you move 'er around in the maintenance area, we made up this sign and attached it to the tail stand.

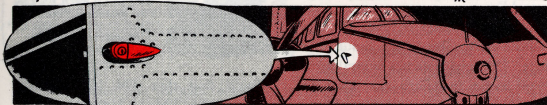
Now, when a recruit comes into the outfit, he's aware of the bird's tipsy character at a glance.



The Ground Crew
Ft. Monmouth, N. J.

(Ed Note—A good reminder about the bird's delicate center of gravity.)

DOOR, LOUIE



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And don't forget that a "hot" mag is still a possibility.

BUNDLES FROM HEAVEN

Dear Windy,

I've searched the Bird Dog (O-1) and Beaver (U-6) manuals for some poop on the weight and size of wing bundles that we're allowed to haul, without any luck.

Since we've been making a lot of drops lately, can you fill me in on the maximum allowable dimension for a wing bundle?

MSgt T. D. K.

Dear Sergeant T. D. K.,

Can do. As far as weight goes, the operator's manual for the Bird Dog says you can carry 250 pounds under each wing, for a total of 500 pounds per bird. And the operator's manual on the Beaver allows you 500 pounds per wing, for a total of 1000 pounds per bird.

But for guidance on the size of the bundles you'll have to go to Change 5 (24 May 61) of TM 10-500, "Air Delivery of Supplies and Equipment: General."

Chapter 3, Section II, para 26, says a bundle on the Bird Dog should not be over 432 square inches frontal area, and 60 inches in length, per wing. So you could wrap up two 60-in long bundles and hang one under each wing for a total of 864 square inches of frontal area.

The frontal area limit of a bundle on the Beaver is 684 square inches under

each wing for a total of 1368 square inches per bird. The recommended length of each bundle is also 60 inches.

'Course you may split up your load by hanging either two or four bundles on your bird, but the total allowable weight and dimension will always remain the same.



**YOU NEVER
TRY TO LAND
WITH BUNDLES ON
YR' WINGS...YOU
COULD BUST 'ER UP
...ALWAYS DROP
A DROP**

You'll find that TM 10-500 and others of the TM 10-500-series real handy when it comes to loading and rigging on aircraft. If you don't have the ones you need, check your latest index, DA Pamphlet 310-4, and order on a DA Form 17.

Windy

SO WHAT'S EXCESSIVE?



Dear Windy,

We have this Mobawk (OV-1C) T53-L-3 engine that's using 1.2 pints of oil an hour. Is this excessive?

Para 19 of TM 55-405-5 says to "remove an engine if the oil consumption limits the range of an aircraft." But everyone here says that particular paragraph applies to recip engines only. I contend that this applies to all aircraft engines and would like to have your opinion on this.

Sp-5 M. T.

Dear Specialist M. T.,

I'm with you! Even though that paragraph is in a chapter dealing with recip, any engine should be removed when it starts to hold down the aircraft's mission capabilities.

How much oil that particular engine consumes is not too important in itself. The big question is: Will the aircraft be able to accomplish all its missions without being unnecessarily restricted either on duration of flight time or in the choice of flight paths due to local geography?

If neither the aircraft nor engine manuals say anything specific on this, you're allowed to follow a general guide, such as TM 55-405-5.

Just for a comparison, the specs on a brand new engine (0:0 hours) allow a max oil consumption of 1.2 pints an

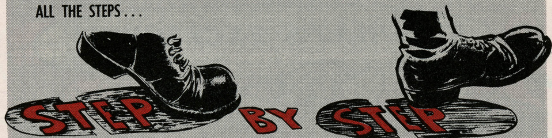
hour. But a tight new engine and one with several hundred field use hours on it are two different engines. There's really no need to be that restrictive on a used engine unless your mission requirements are very strict.

Most outfits usually begin paying attention to oil consumption when it gets up around a quart an hour—and may not get around to replacing an engine until consumption goes as high as 2.4 pints (0.3 gallon).

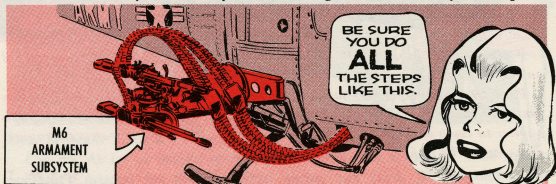
But then their missions and locations are not the same as yours. So it's up to your own maintenance officer to make the final decision, based on how badly that 1.2 pints an hour rate affects your Mohawk's mission requirements locally.

Windy

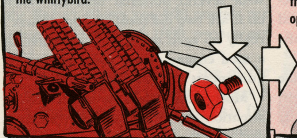
ALL THE STEPS...



Take the right step first—and everyone after that the way you're supposed to. 'Specially if you want to keep from damaging the electrical connector of the M6 armament subsystem when you're removing the mount from your Iroquois.



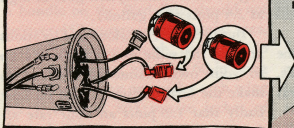
STEP ONE: Remove the eight nuts, eight bolts and 16 washers holding the mount to the whirlybird.



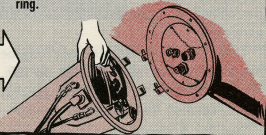
NEXT, swing the gun mount part-way open and disconnect the electrical connector from the aircraft receptacle. Now you can finish opening the gun mount.



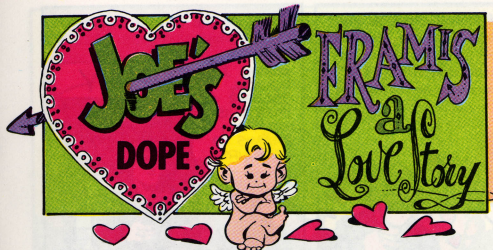
THIRD STEP: Disconnect the two hydraulic connectors from the aircraft receptacles.



LAST STEP: Remove the gun mount from the hinge pins located on the gun mounting ring.



You might be able to do the whole job yourself if you're the muscle-type. But play it safe and easy by getting a buddy to lend a hand.



The heart-warming story of a soldier and a weapon named "FRAMIS"

"FRAMIS" was a child of military necessity . . . born out of research and development her arrival was cheered by all . . .

The daughter of modern warfare she was the ultimate in weaponry . . . and advanced design.

Dependable, efficient, finely turned parts—she was a model of great performance.

BUT to the soldier who first saw her . . . she was just

BEAUTIFUL!!

... Beautiful in the kind of sleek way that has always captured a soldier's heart ... so, it was not at all surprising that with FRAMIS and the soldier—it was love at first sight ...

YOU'RE FOR ME, BABY.



... And the wedding took place the next day.

AHEM, DO YOU, SOLDIER TAKE THIS WEAPON, FRAMIS TO BE YOURS...

SUPPLY



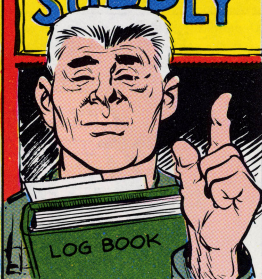
...TO CARE FOR, AND MAINTAIN UNTIL OBSOLESCENCE OR DEATH DO YOU PART????

I DO.



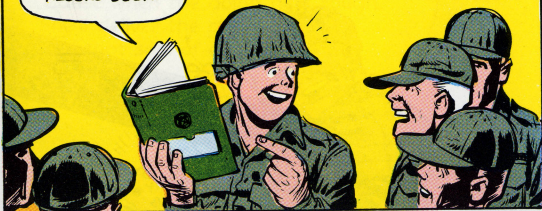
...THEN, I PRONOUNCE YOU MAN AND WEAPON!

SUPPLY



... And so they lived in military bliss ... to the soldier she was the most beautiful thing in his life. Her performance was flawless.

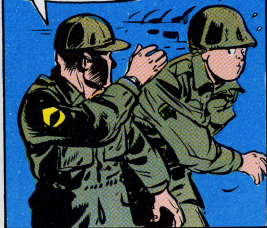
LOOK AT THIS
RECORD BOOK.



And the soldier's love grew to a point of pure passion ... he polished her with loving tenderness until she shone like a fire engine on July 4th ... no scratch, no chip escaped his eye.

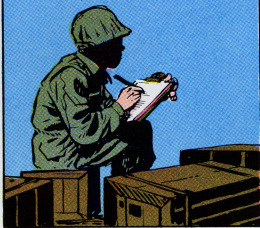
WHEN Y'GONNA
BRING HER IN FOR
AN OIL CHANGE?

NO
TIME,
SARGE!



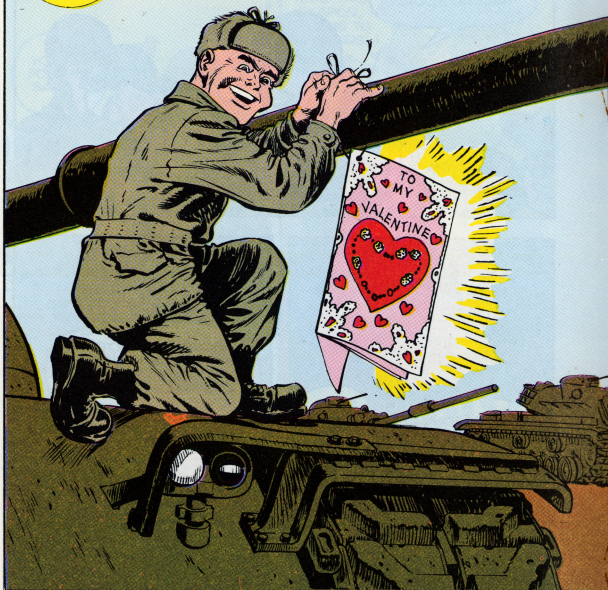
And so it seemed that this love affair would go on forever ...

ABOVE ALL, I GOTTA
FIX HER PAINT JOB.
THAT LAST EXERCISE
CHIPPED HER BAD.





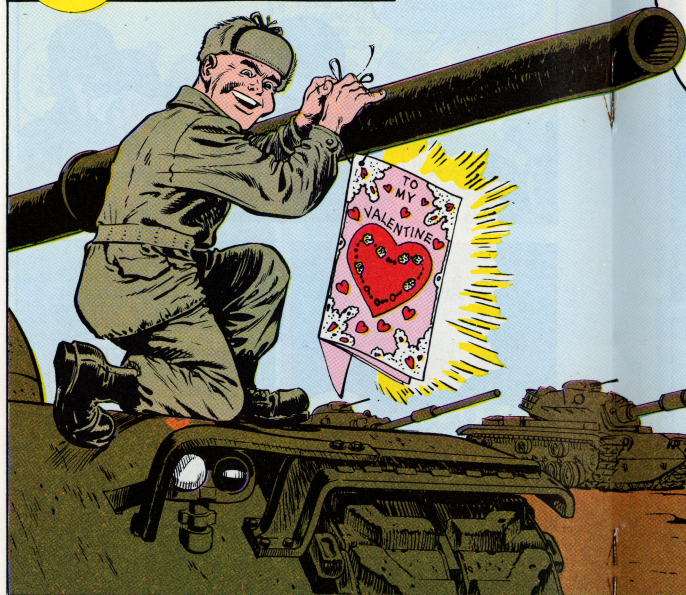
Dope Sheet



WE HAVE THE WORLD'S BEST EQ

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULL

JOE'S Dope Sheet



This romance that he's got with his gear;
Is something at which you don't sneer.

'Cause when the going gets rough,
She'll deliver the stuff;
And that sort of deal you don't queer.



WE HAVE THE WORLD'S BEST EQUIPMENT ...*Take care of it*

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

This romance that he's got with his
gear;
Is something at which you don't
sneer.

'Cause when the going gets rough,
She'll deliver the stuff;
And that sort of deal you don't
queer.



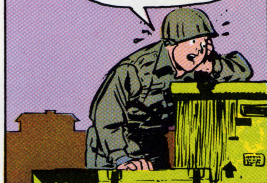
EQUIPMENT

...Take care of it

ETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

Then one day a small fissure appeared in the alabaster of their life . . . whether it was because the novelty was fading or just age wasn't clear . . . all the soldier knew was . . .

SHE AIN'T
PERFORMING LIKE
SHE USED TO...
HMMM



So . . . the soldier began to make unauthorized modifications . . .

BET IF I PUT A
SUPERCHARGER
ON THE CRANNIS
IT'LL SOUP HER
UP...



But she was never designed to be a hotsy-totsy rod and she began to have attacks of burned bearings . . .

I KNOW WHAT YOU
NEED HONEY... HOW ABOUT
A NEW COAT OF PAINT. BOY,
YOU'LL KNOCK 'EM DEAD
AT TOMORROW'S CMI.



But clearly that was not the answer for the next day . . .

DEADLINE THAT
EQUIPMENT!!

THAT'S
THE 6TH
TIME IN
60 DAYS...
WHEW!



Yes, something inside her was wrong . . . and with each trip to the shop the flame of their early passion soon grew dimmer . . . now the soldier's eye roved . . . he thought of OTHER, younger weapons . . .

PSST I HEAR THEY'RE GONNA ISSUE THESE NEW DING-USES.

BOY, LOOKIT THIS NEW PUSH BUTTON JOB...
WHAT I COULD DO WITH THAT...



One day they suddenly blew the whistle for operation "slam bang" . . . the soldier was scheduled to be shipped out to some unheard of hot spot on the other side of the globe.

YOUR FRAMIS READY TO GO, SOLDIER?

MOX NIX, SARGE, THEY'LL BE GIVING US THOSE NEW DINGUSES AT JUMP OFF.



BUT THEY DIDN'T . . . he went with framis—as she was—in a way he was glad, for after all, he had trained with her . . . besides he really didn't know how sick she was inside . . .

OKAY, BABY LET'S GO...



. . . And so in their first, for real action, together she failed him.

HERE THEY COME...

SHOW YR STUFF BABY...

OH/NO... Y'JAMMED UP...



When soldier got out of the hospital . . . first thing he did was to find framis who was recovering too . . .

HOW IS SHE, SARGE?

JUST NEEDS A LITTLE 3RD ECHELON SURGERY... SHE'S GOOD AS NEW.

WHY DID SHE FAIL WHEN I NEEDED HER MOST??

SHE WAS ROTTEN INSIDE, BOY... RUST, WORN BUSHINGS, IN NEED OF REPLACEMENTS. CARE OF EQUIPMENT IS MORE THAN PAINT AND POLISH!

HER SKIN WILL NEVER BE WHAT IT WAS... BUT HER INNARDS ARE GOOD AS EVER. YOU SHOULD GET YEARS OF PERFORMANCE OUT OF HER!

...PROVIDING YOU ARE FAITHFUL IN YOUR BASIC PREVENTIVE MAINTENANCE.

*And so . . .
they lived
happily
ever
after*

You can see them on the post every day . . . not so slick as the new jobs, perhaps, but a match for anything in performance . . . there are thousands of love stories like this wherever men and equipment live together . . . this has been one of them.



FIREPOWER

IT'S URGENT
IT COULD SAVE
YOUR SKIN.

URGENT
MWO 9-1005-224-30/1
DEPARTMENT OF THE ARMY MODIFICATION WORK ORDER
**MACHINE GUNS, 7.62-MM, M60 AND M60C: WELD-
ING THE MOUNTING BRACKET TO THE RECEIVER**

Headquarters, Department of the Army, Washington, D.C.
26 August 1963

WELD, IT's URGENT!

If your M60 or M60C machine gun sports any serial number from 35,500 to 37,500, make sure support gives it a treatment of MWO 9-1005-224-30/1 (26 Aug 63). This is an URGENT that welds the mounting bracket to the receiver. It'll cut down on breakage of the trigger housing mounting lug—

and could save your skin!

As a further precaution it would pay to check all your M60 Machine Guns (regardless of serial number) in the trigger mounting lug area for evidence of cracks. The MWO may be applied to any weapon showing evidence of cracks.

MWO CAN BE
APPLIED TO ANY
WEAPON SHOWING
CRACKS.

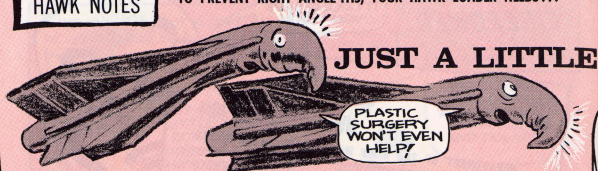
WELD $\frac{1}{8}$ "

TRIGGER
ASSEMBLY
AND HOUSING

TRIGGER HOUSING
MOUNTING LUG

HAWK NOTES

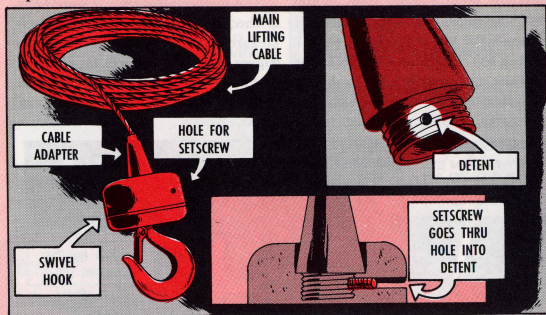
TO PREVENT RIGHT ANGLE-ITIS, YOUR HAWK LOADER NEEDS...



You'd better believe it . . . a Hawk missile that has its nose pointing north and its nozzle heading east or west is not about to go anywhere—except to salvage.

A sudden case of this "right angle-itis" happened while the crew was moving the bird with the main lifting cable on a crane-rigged loader. The cable and its weighted swivel hook parted company and that left the missile with one place to go—down.

Maybe you don't know it . . . but the main lifting cable has a threaded adapter—with a detent in the threads—that screws into the swivel hook. And



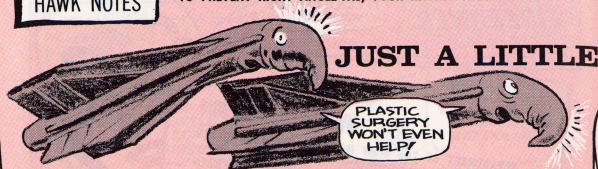
there's a hole in the weighted part of the hook—a hole that leads to the detent in the adapter. At least it's supposed to lead to the detent.

A setscrew goes into the hole and is turned into the detent with a $3/32$ -in hex-head wrench. And that's what keeps the cable and swivel hook from separating. Now you know.

If you ever need to assemble the swivel hook to the cable, you can fiddle around until you finally get things lined up so's the setscrew goes into the de-

HAWK NOTES

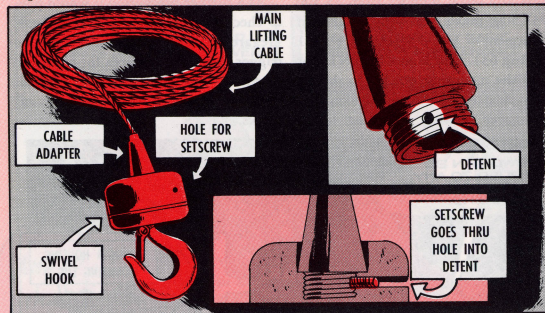
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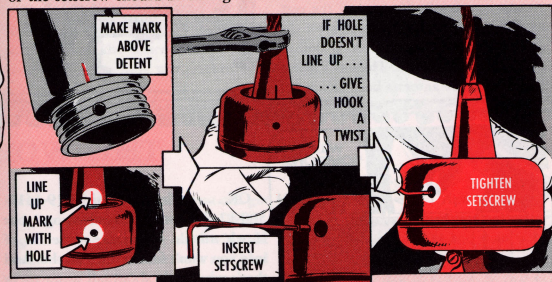
If you ever need to assemble the swivel hook to the cable, you can fiddle around until you finally get things lined up so's the setscrew goes into the de-

SETSCREW

tent. There's an easier way, tho.

Before the parts are put together, take a cold chisel and make a 1/2-in or 3/4-in mark on the adapter—smack above the detent and in line with it. Now . . . run the swivel hook onto the adapter far enough for all the threads to be used up. If the hole doesn't line up with the mark on the adapter, give the hook a slight twist in the direction that will take care of the situation.

You're all set to stick the setscrew in the hole and tighten it with the hex-head wrench. Unless you goofed in putting the mark on the adapter, the point of the setscrew should be sitting in the detent.



To be on the safe side, take a wrench to the adapter and see if it comes loose from the swivel hook with a little tugging.

It'd be a good idea in the future—like now—to disassemble the swivel hook and cable so's you can mark the adapter right away. You might forget it if you wait until you take 'em apart for another reason.

You won't have to give a second thought to whether the swivel hook is secure once a new one, FSN 2590-977-0950, gets into the supply system.

No matter what kind of hook you have on the end of the cable, tho . . . you also want to check the cable for broken strands before you lift any missiles.

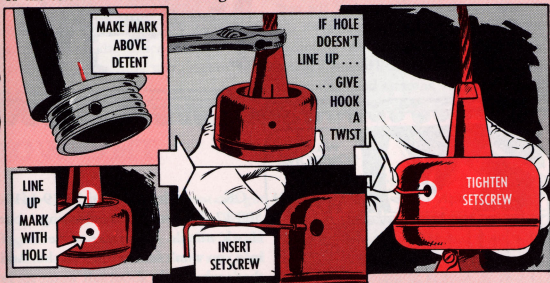
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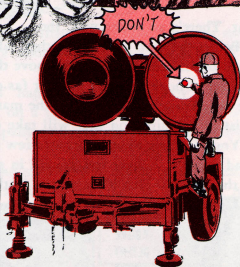
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NO PRIZE

You know those pictures where you're supposed to guess how many things are wrong in 'em? And maybe you get a prize for hitting the right number of mistakes.

Eyes right   and you'll see a picture of a Hawk AN/MPQ-33 CW illuminator that has only one thing wrong with it. There's no prize for guessing what it is, but your outfit will be a winner if you come up with the right answer—especially if you and the rest of the guys in your battery don't do what the man in the picture is doing.

Figure it out? Right. The guy's using the transmitter antenna horn as a hand



THE WORK

OK . . . so Section II of TM 9-1410-500-12 has scoop on cleaning your Hawk missile. But there's one bit of info you won't find in the TM, tho. And that's what to do about salt water spray that hits the birds.

So read on. The work you save may be your own.

First, all missile components want to be protected from salt water as much as possible. That figures.

Painted surfaces that get sprayed with salt water ought to be washed down with fresh water as soon as possible—

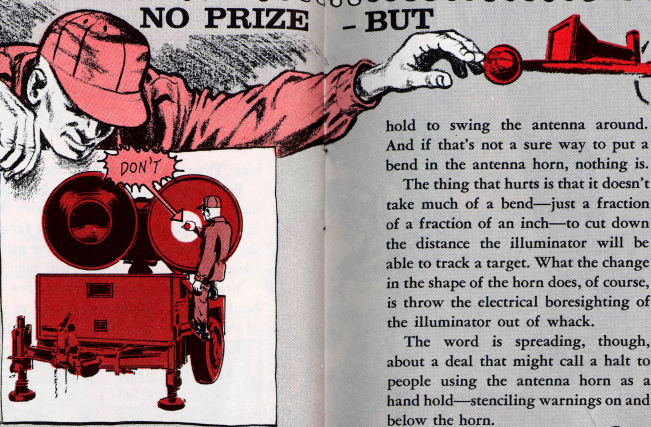


NO PRIZE - BUT

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Figure it out? Right. The guy's using the transmitter antenna horn as a hand



hold to swing the antenna around. And if that's not a sure way to put a bend in the antenna horn, nothing is.

The thing that hurts is that it doesn't take much of a bend—just a fraction of a fraction of an inch—to cut down the distance the illuminator will be able to track a target. What the change in the shape of the horn does, of course, is throw the electrical boresighting of the illuminator out of whack.

The word is spreading, though, about a deal that might call a halt to people using the antenna horn as a hand hold—stenciling warnings on and below the horn.

What you do is stencil the words "Caution Do Not Bend Antenna Feed-Horn" below the horn. Use 1/2-in letters for "Caution" and 1/4-in letters for the rest of the warning. You might also cut out a 1-in arrow stencil and have it pointing to the antenna horn.

ON BOTH SIDES



And stencil—in 1/4-in letters—the words "Caution Not a Hand Hold" on both sides of the antenna horn.

You want to do the stenciling with the white lacquer you use for touchup work on the missile.

THE WORK YOU SAVE



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Painted surfaces that get sprayed with salt water ought to be washed down with fresh water as soon as possible—

before the stuff has dried if you can get to it in time to save elbow grease. Washing down means going easy with the water—not using a hose with any kind of pressure behind it.

When it comes to machined parts, unpainted mechanical components or painted mechanical parts that water might foul up, try using fingerprint remover to get rid of the spray. That's right . . . fingerprint remover.

FSN 8030-281-2338 gets you a gallon can. It's listed, along with other size containers, in Table 191 of FSC

C8000-S1, Vol 1-B (1 Apr 63).

What you do is moisten a rag with the fingerprint remover and then wipe away. Nothing to it.

Maybe you'll miss a spot or two of spray in your cleaning. So keep your eyeballs peeled for any signs of rust or corrosion that might show up later. (It's a good idea, of course, to be on the lookout for rust or corrosion no matter what might cause it.) If you come across any, take care of the situation the way it says in Table X of TM 9-1410-500-12.

- BUT



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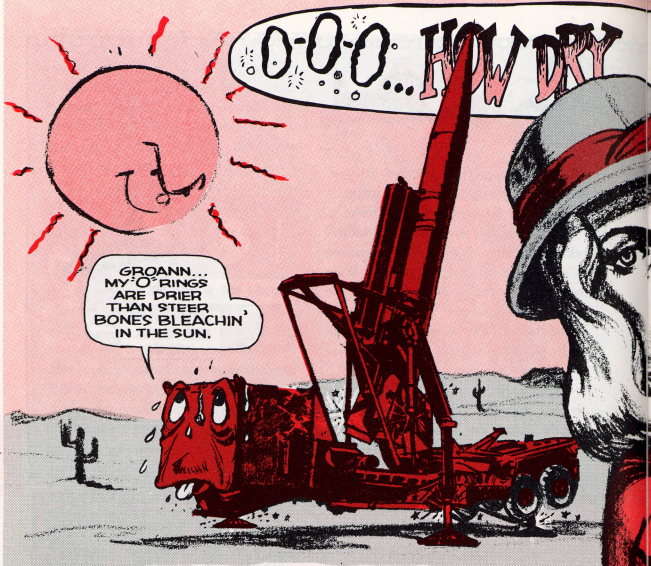
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Maybe you'll miss a spot or two of spray in your cleaning. So keep your eyeballs peeled for any signs of rust or corrosion that might show up later. (It's a good idea, of course, to be on the lookout for rust or corrosion no matter what might cause it.) If you come across any, take care of the situation the way it says in Table X of TM 9-1410-500-12.



Leaking O-rings making your favorite topkick dry, dusty and dangerous?

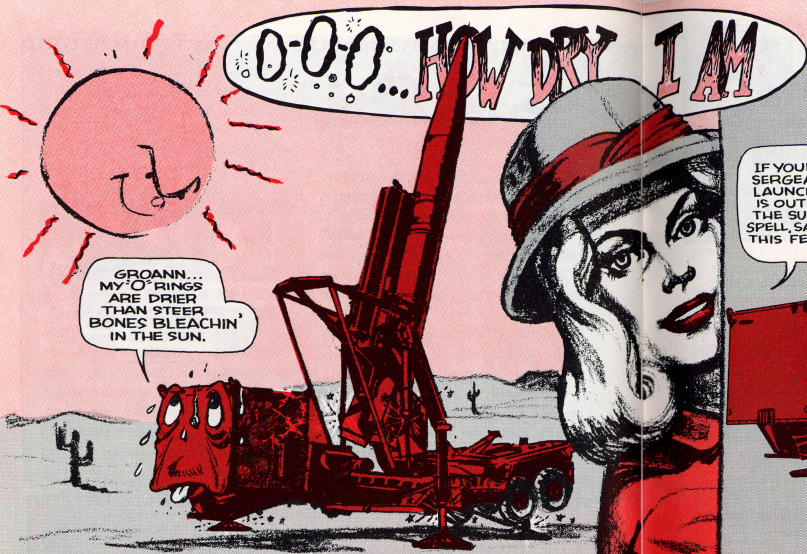
Normally, a couple of fast ones at the NCO club will relieve the tension in a hurry. But—if your favorite Sergeant just happens to be a hot, surface-to-surface missile—it's gonna take a little more PM than that to cut down on the miseries.

The leaking O-rings in question that are kicking up a storm are the ones on the actuators of the U-frame, outrigger jacks and rear leveling jack on your XM504 Sergeant launching station.

Like after your launching station's been set up a spell—with the jacks and U-frame extended—the exposed actuators act as prime dirt and dust collectors before they turn as dry as the Sahara. Right?

Then, when the march order comes and you start retracting the actuators, you suddenly get a funny feeling that you're making like that little old coffee maker, off on a bean-grinding bit . . . and that all's not well.

You're so right . . . all's not well—in spades.



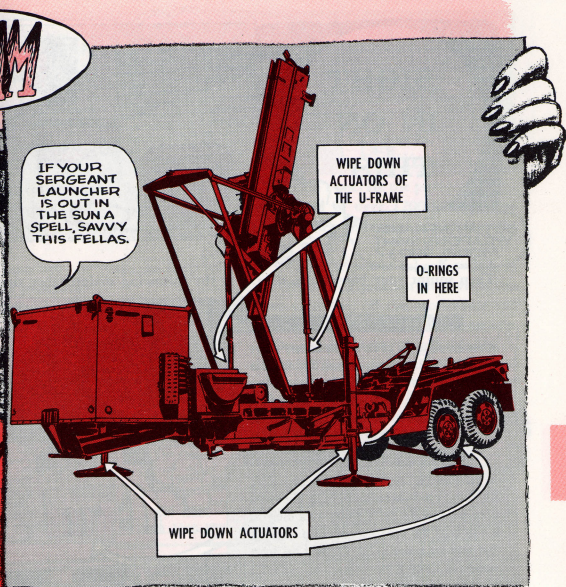
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Reason?

The leaking O-rings have lost their moisture and the actuators have turned into dust-laden agitators—so you're grinding the guts out of the inside of the jacks and U-frame.

The fix?

Lube, dude, lube.

First—just before you start retracting, extend the actuators about three more inches. Then wipe them down with a rag soaked in the hydraulic fluid, FSN 9150-252-6383, that's listed in your TM 9-1440-301-12P/1.

Now, retract the actuators and things will go as slick and smooth as a downtown Saturday night.

Develop this PM habit and you'll find your Sergeant a lot easier to get along with.

I AM

IF YOUR
SERGEANT
LAUNCHER
IS OUT IN
THE SUN A
SPELL, SAVVY
THIS FELLAS.

WIPE DOWN
ACTUATORS OF
THE U-FRAME

O-RINGS
IN HERE

WIPE DOWN ACTUATORS

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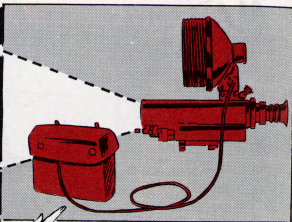
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SIGHT IN ON THIS

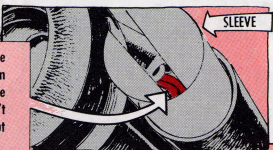
GOT AN INFRARED
WEAPONS SIGHT
MODEL 9903?



Then squint your baby blues thru it at the following maintenance tips:

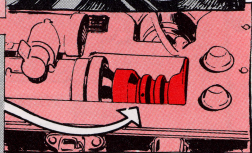
((1))

When installing the power supply battery sleeve (for the BA-42 battery), be sure the wires in the tube slip thru the slot in the sleeve before shoving the sleeve all the way home. If you don't position the wires in the slot, the sleeve can cut them. It's a major job to put in new wires.



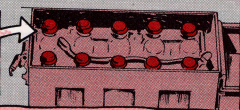
((2))

As you store the weapons sight in its case, place the rubber eyeshield so it rests in its slot in the same position it'd be in if you were using it. If you bend the eyeshield and keep it stored that way for a day or so, it'll hold the same shape you stored it in.



((3))

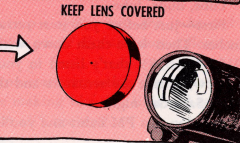
Don't overtighten the plastic caps of the BB-429/U battery, used with the weapons sight. Just snug 'em up. Overtightened caps can break when you try to remove them.



((4))

To keep the lens free of damage from sand or dirt in high winds, let the rubber reticle alignment sight stay on the lens till you're ready to use the sight. Put it back on when you're finished using it. Otherwise, blowing sand'll make the lens look like you took a hammer to it.

KEEP LENS COVERED



((((*)))

You zeroed in?

M107 PUMP POOP

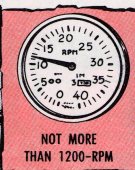
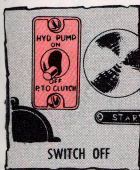


AIN'T THAT ROMANTIC LIKE...

The engine driven hydraulic pump on your M107 SP 175-mm gun or your M110 SP 8-in howitzer giving you grief?

These are the ways to keep your pump pumping:

1. Be sure your power takeoff switch is in the OFF position when you're driving your vehicle to and from battery sites.



2. Don't operate the pump at an engine speed of over 1200-RPM except when you're placing or lifting the spade.

3. Put the power takeoff switch in the ON or OFF position only when you have your foot off the accelerator and the engine has slowed down to an idle.

Do these three things and you shouldn't have any trouble with your pump.



IGNORE 'EM AND YOU'RE LIKELY TO BUST YOUR PUMP SEALS.

REVERSE PIN

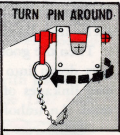
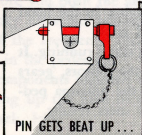
This won't put any english on your Davy Crockett, but it'll sure save an important gizmo.

The lock pin (FSN 1025-776-0046) that secures the trunnions of the 155-mm recoilless M64 to the left side of the carriage gets beat up bad by the sight mount bracket when the weapon's at high elevation if you install it from the rear.

So, turn the pin around, and the sweat's off.



YOU SHOULD HAVE NO TROUBLE WITH THE PIN AFTER THIS FIX.



COMMUNICATIONS



HEY!
WHO'S THE
LITTLE GUY
WITH THE
DIAPERS?

Interested in a tip or two on a Tippy or two?

Well flap an earlobe and roll an eyeball thisaway whilst some tid-bits unfold on the AN/TPS-21 and -33 radar sets.

Here's the story on storage . . . first:

FUMES AND GOO

To avoid the gooiest mess you ever saw, plus the banshee howls of your support people, empty all of the gasoline from the gravity feed gas can of the PU-422/U generator set (which powers both radars). If you can get out the last drop, do it. It's a good idea, too, to take the cap off the can and let the can air out before you store it.

You know, sure enuf, that the generator, gas can and antenna pedestal of the radars get stored in the same case. Presto! Just the kinda homey situation needed for this macabre comedy.

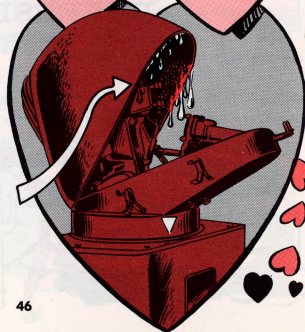
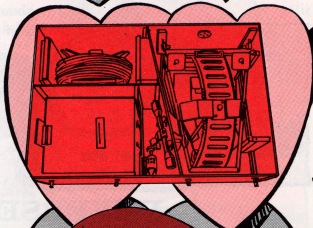
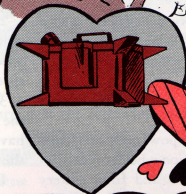
Like so: Fumes from the vented gas can seep throughout the case. After awhile, the fumes get into the hood of the antenna pedestal. The tar-like undercoating in the hood melts into liquid goo.

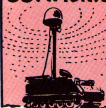
Then the gook starts running. It gets down into the motors, gears and linkages of the antenna pedestal. An unholy mess results.



TIPS ON THE

THAT'S
CUPID...
DON'T YOUZ
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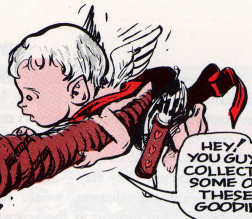


46

TIPS ON THE

THAT'S
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TIPSIES



HEY!
YOU GUYS
COLLECT
SOME OF
THESE
GOODIES.

The pedestal has to be disman-
tled and cleaned by your support.
It's time-consuming, dirty work. If
the gook stiffens up, it could be ex-
pensive for you. One thing sure:
Your support won't throw any-
thing complimentary your way.
Another thing: You just might
need your radar—and you won't
have it.

So-o-o, store that and hang on
for a second storage tip.

LINE-UP FOR STORAGE

This one's on the other side of the radar set case—
the antenna pedestal. See that white arrow on the
rotating section of the pedestal? And that similar
white arrow on the base section?

Before storing the pedestal in the case, line up
the two arrows. With the arrows looking at each
other, the pedestal's ready to be stored. Getting the
pedestal in at any other position is downright dif-
cult. Furthermore, it won't fit.

So much for taking the sweat off the storage end.

LINE-UP FOR SET-UP

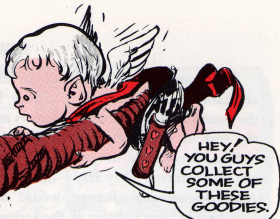
When you're setting up the radar set, take an
extra second before you push the antenna pedestal
into the frequency converter-transmitter. Be sure
the guidepins of the frequency converter line up
with their holes in the pedestal.

Shoving the components together with guidepins
unaligned can bung up the pins of the J107 jack.
You need that jack, Jack.

47



TIPSIES



The pedestal has to be dismantled and cleaned by your support. It's time-consuming, dirty work. If the gook stiffens up, it could be expensive for you. One thing sure: Your support won't throw anything complimentary your way. Another thing: You just might need your radar—and you won't have it.

So-o-o, store that and hang on for a second storage tip.

LINE-UP FOR STORAGE

This one's on the other side of the radar set case—the antenna pedestal. See that white arrow on the rotating section of the pedestal? And that similar white arrow on the base section?

Before storing the pedestal in the case, line up the two arrows. With the arrows looking at each other, the pedestal's ready to be stored. Getting the pedestal in at any other position is downright difficult. Furthermore, it won't fit.

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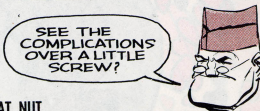
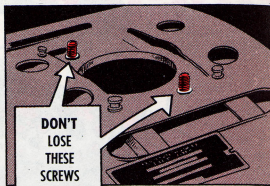


SCREWY BLOOEY

Right smack in the middle of the not advisable and unnecessary category is the removal of the mounting screws on the rear of the antenna reflector.

Like, you should never have to take out those screws. They stay—like glue. And the antenna element would be hard-pressed for support if the screws weren't there. So would the reflector.

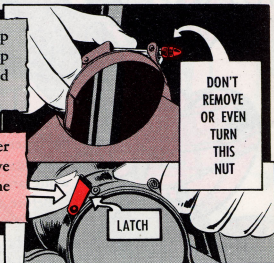
And here's the sticky part. If the screws get lost, they can't be replaced. They're not in the supply system. What's worse, new reflectors come without the screws.



STOP THAT NUT

Another "unnecessary" bit: The stop nut on the antenna pedestal hub clamp doesn't have to be turned—or removed—to free the clamp.

The nut is factory adjusted for proper clamp tension. Which means you've just gotta work the latch to get the clamp on or off. Let the nut alone.



Also, you have a problem similar to the mounting screws on the antenna reflector.



If you ever have trouble getting the clamp on or off, grab a look at page 2, para 6-2-2, of Change 3 to TM 11-5840-229-15. It spells out the right kind of latching and unlatching of the clamp.

Even if you don't have trouble, grab a look at the TM. You might find some other stuff in there that'll make your difficult job a little less difficult.

And speakin' of tips, you got anything good at Hialeah?

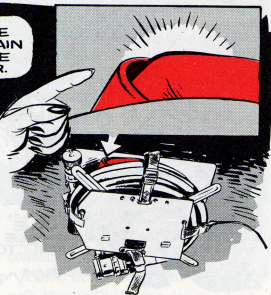
REEL BAD



EACH CABLE IS UNDER STAIN BEYOND THE CONNECTOR.

There's no real good reason for it, but some guys go all out when they wrap the W2001, W2008 and W2009 cables around the RL-211/TPS-33 reel that comes with the AN/TPS-33 radar set. You know . . . they pull the cables around the reel so tight you think they're trying to make room for a coupla more cables.

The way things are . . . when you put the connector on each cable into the reel and then start winding, there's a mean bend just beyond each connector. It's something that can't be helped.



But you make matters worse when you pull on each cable to make a tight wind. That kind of stuff puts even more of a bend in the cables . . . and then the wiring inside gets to hurting.

So go easy . . . the straps'll keep the cables in place—even if they are wrapped loosely.

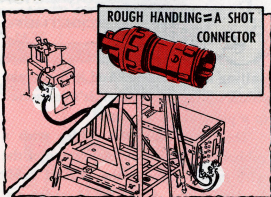


EASY DOES IT

They'll do a job—but.

That about tells the story with the connectors used on cables like the one that runs between the PU-422/U generator set and AM-2575 amplifier-detector power supply used with your AN/TPS-33 radar set.

There's no telling how long this kind of connector can go to the "school of hard knocks"—the sort you get from dropping the connector on a hard surface or rough handling in hooking it up or disconnecting it. One day, tho,

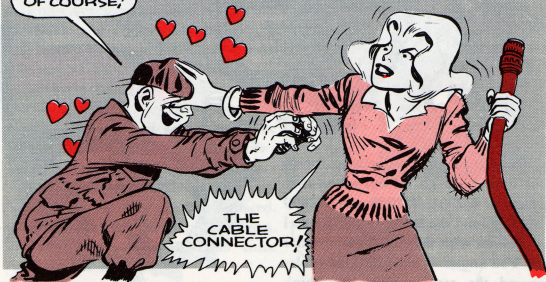


(maybe sooner'n you think) the connector is going to break. And that's when it will have had the course.

In other words . . .

HANDLE WITH CARE

OF COURSE,
CONNIE,
OF COURSE!



As you know, some power cables are built with a wire mesh running back a ways from the connector. The wire mesh keeps the connector and cable from parting company from constant

The rubber sleeve'll do a good job as long as you remember you're not supposed to make like you're twisting a cow by the tail when you remove and reconnect the cable. Otherwise, it'll pull loose from the connector.

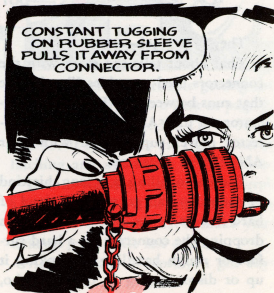
If the sleeve does pull away from the cable—no matter how careful you are—your support unit has the job of repairing it.



pulling and twisting. And it helps take strain off the cable when it's connected to a piece of equipment.

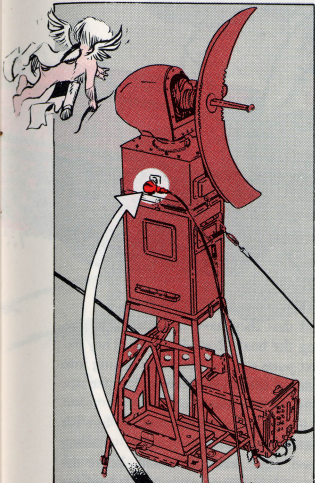
Then you have the cables with a rubber reinforcing sleeve instead of the wire mesh—like on the W2001 cable used with the AN/TPS-33 radar set.

When you're handling this kind of cable, you have to change your ways—when it comes to the business of pulling and twisting.





CABLE TROUBLES



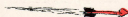
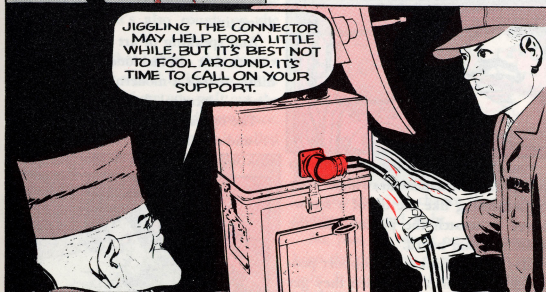
The W2001 cable that runs from the AM-2575 amplifier-detector power supply to the AN/TPS-33 radar set sure gets some guys to fussin' and fumin'.

What shakes 'em up is the natural free play in the cable connector that goes into the radar set.

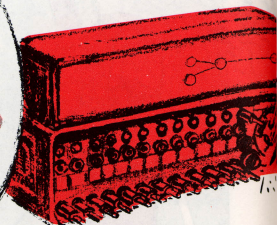
Maybe they get a bad picture on the "A" scope and so they start to jiggle the connector. And if the scope straightens out, they figure they moved the connector just right.

Could be the connector was the culprit. More'n likely, tho, it was a broken wire in the cable that the jiggling brought together again. And any kind of pulling on the cable will show that something's wrong inside the cable as the scope picture goes on the bum again.

So when you get into this situation, don't fool around. It's time to call on your support unit.

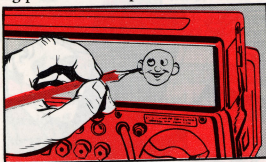


INFO FOR "REMBRANDTS" AND "DOODLERS"



It's a great idea—having that traffic diagram board on the front of your SB-22/PT portable field switchboard. You can tell at a glance just what lines go where.

Some operators also use it as a blackboard. You know . . . to practice drawing pictures with a pencil or chalk.



And then there are the guys who go for making permanent drawings. They use something like the tip of a screwdriver to scratch the pictures on the traffic diagram board.

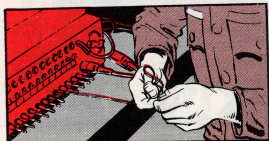
Maybe you think your support people don't get shook up when they get the switchboard in for repair and then

find that they have to spend time getting the board back in shape. They expect parts to wear out, but running into damage that didn't have to happen . . . that's a different story.

Practice may make perfect, but it's better you should practice making good, clear traffic diagrams. Leave the artwork to the people who get paid for doing it.

And speaking of art work, in addition to that old fashioned stuff of doodling, there's a modern way of killing time—"electrical doodling."

The operator sits at the switchboard . . . and now and again he has some time to kill. So what does he do? He takes

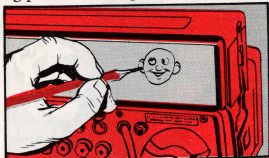


YOUR SB-22/PT GRAB-BAG

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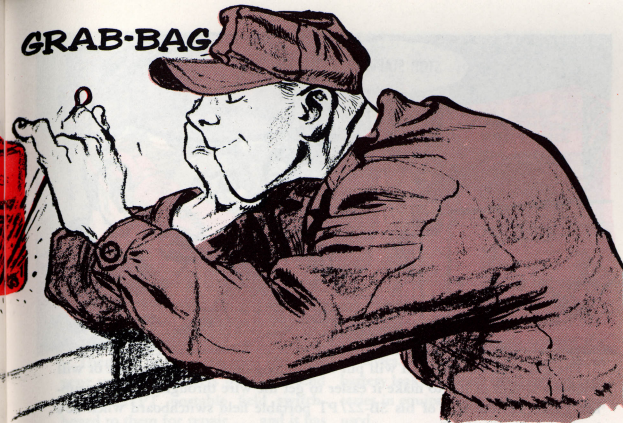
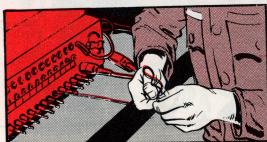
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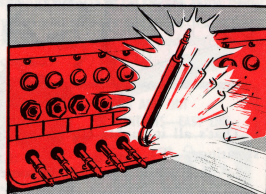
up "electrical doodling"—like he pulls out one of the plugs and twists the cord into all sorts of shapes. Or maybe he pulls out a coupla plugs and practices knot-tying with the cords.

It's a great way to pass away idle minutes, but it's also rough on the wiring.

There's another "game" that doesn't do the plug or signal lights any good. That's the one where you pull out the plug and then let it fly back into place. It's bad enough when the plug is pulled

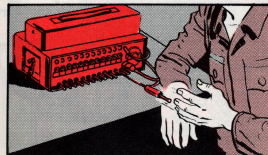
back to the switchboard on the straight and level. But when it's pulled back and released at an angle, it's murder.

The plug takes a beating as it bounces against the front of the switchboard

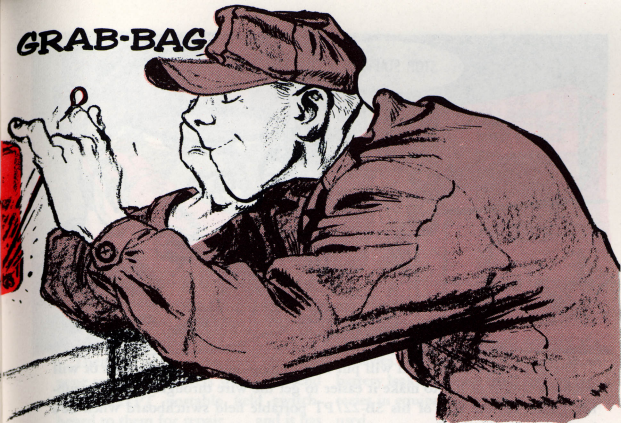


. . . and there's a chance that it might clobber a signal light.

So, pass the word on all lines . . . keep the doodling to paper and pencil only. It can hurt—and bad—on your equipment.



GRAB-BAG



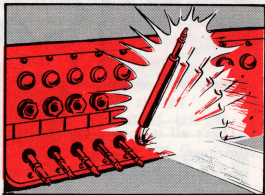
up "electrical doodling"—like he pulls out one of the plugs and twists the cord into all sorts of shapes. Or maybe he pulls out a coupla plugs and practices knot-tying with the cords.

It's a great way to pass away idle minutes, but it's also rough on the wiring.

There's another "game" that doesn't do the plug or signal lights any good. That's the one where you pull out the plug and then let it fly back into place. It's bad enough when the plug is pulled

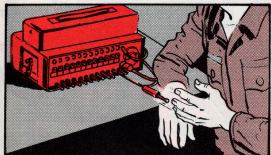
back to the switchboard on the straight and level. But when it's pulled back and released at an angle, it's murder.

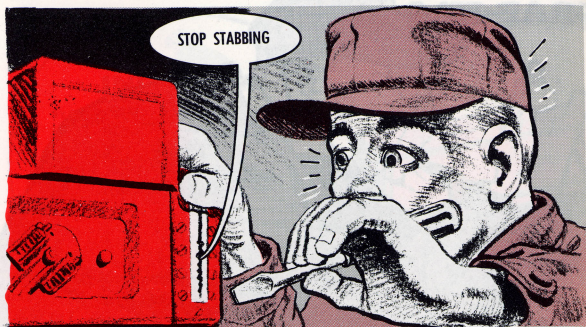
The plug takes a beating as it bounces against the front of the switchboard



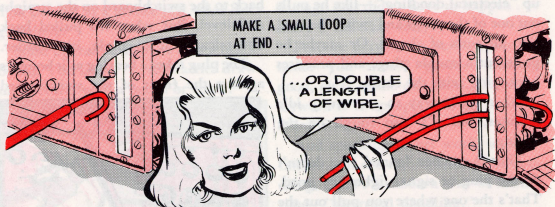
... and there's a chance that it might clobber a signal light.

So, pass the word on all lines . . . keep the doodling to paper and pencil only. It can hurt—and bad—on your equipment.



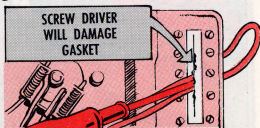


The guy who's on the ball will put a small loop in the end of the wire or will double a length of it—to make it easier to get the wire through the heavy rubber gasket on the side of his SB-22/PT portable field switchboard when he's hooking up a line or three.



That's all it oughta take to get the wire through without doing a lot of sweating.

In other words . . . don't use something like a screwdriver to push the wire through. The gasket is tough, but it's not made to take the kind of punishment that the blade of a screwdriver can dish out. All you have to do is whack off a few chunks of rubber and all sorts of junk can get inside the switchboard.





You know how it is when you wind up doing double work because you kept putting off until tomorrow what you should've done yesterday.

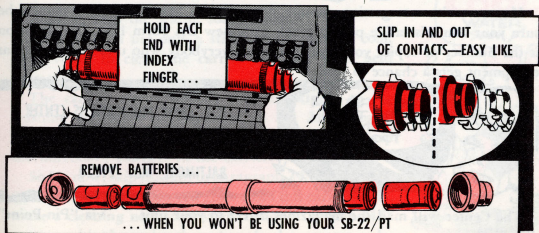
Then you have a darn good idea how your support unit feels when you send an SB-22/PT portable field switchboard to them for repair . . . and it has leaking batteries. It's one thing for them to put the switchboard back in shape, but it's something else again when they have to clean the acid that has leaked all over the inside of the case.

So check the batteries now and often. Don't wait until the audio weakens and the red light acts "tired."

It's a darn good idea when you know

you're not going to be using the switchboard (and any other communications/electronics equipment that uses dry batteries, for that matter) to remove the batteries. Most of the damage from battery leakage comes from leaving batteries in equipment when it's not being used.

And whether the batteries need replacing or not . . . don't forget to go easy when you put the battery case back in place. Take hold of each end with an index finger and slip it into the spring contacts. You do the same thing when you remove the case for the same reason: To save wear and tear on the contacts.



A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 3-4520-200-25P, Sep Heater, Water, Oil, M1.
TM 5-2410-202-10, Oct Tractor, FT, Cat D-6.
TM 5-2420-200-15, Sep Tractor, Wheeled, Caterpillar Model 830M.
TM 5-2510-202-15, Oct Repair Parts Van on M295A1 Chassis.
TM 5-3431-205-15, Oct Welding Machine, Arc.
TM 5-3895-219-20, Sep Mixer, Concrete, 165M.
TM 5-3910-203-15, Aug Conveyor Belt 300 Tons.
TM 5-6115-271-12, Sep Generator Set, 3 KW.
TM 5-6115-290-15, Oct Generator Set, Gasoline Engine.
TM 3-6115-311-15, Nov Gen Set 3 KW Szemco Model 1021.
TM 5-6125-208-20P, Oct Motor Generator Power Supply.
TM 5-6230-204-12, Oct Searchlight; DC, 28 Volt, 100 AMP; Xenon Type, Mounting for M-18 and M-60 Tanks.
TM 9-1005-243-12, Oct Armament Subsystem Helicopter, 7.62-MM Machine Gun Quad, M6.
TM 9-4910-409-12, Sep Tester, Diesel Fuel Injector Nozzle.
TM 9-4910-416-12, Sep Test Set, Tachometer-Dwell, Portable.
TM 10-1670-230-23P, Oct Capsule, Cargo, Aerial Delivery.
TM 10-3930-219-20P, Sep Forklift, MHE 169.

TM 10-4510-201-20P, Sep Bath Unit, 8-Head, M1958.
TM 10-8465-204-23, Sep Rucksack.
TM 11-2262-4, Sep Outside Plant Construction, Aerial Cable Construction & Maint.
TM 11-2262-5, Sep Underground Cable Construction and Maintenance.
TM 11-3610-201-10, Nov Title and Dry Developing Machine ES-30A.
TM 11-5805-340-20P, Sep Power Supply PP-949/TGC.
TM 11-5805-342-12P, Sep Multiplexer Group AN/GGA-12 & Demultiplexer Group AN/GGA-13.
TM 11-5815-270-15, Oct Rectifiers RA-87 and RA-87A.
TM 11-5820-509-12P, Sep Radio Set AN/PRC-47.
TM 11-5830-212-20P, Sep Intercommunicating Stations LS-127/F1 Series.
TM 11-5830-234-20P, Sep Intercomm Station LS-201/F1.
TM 11-5840-279-15P, Sep Antenna AS-847/FPS.
TM 11-5965-225-12P, Aug Chest Set Group AN/GSA-6.
TM 11-6115-238-15P, Oct Generator Set PU-551/M.
TM 11-6230-202-14, Nov Light Sets, Ground Obstruction Marker MK-221/G & MK-221A/G.
TM 11-6625-213-12, Oct Test Sets, TS-538/U Series.
TM 11-6 "V"-251-20P, Sep Decibel Meters ME-2/PCM & ME-22A/PCM.
TM 11-6675-49-15, Aug Preamplifiers, AM-18-12/USM & AM-1842A/USM.
TM 11-6675-523-12P, Oct Ammeter ME-222/U.
TM 11-6625-553-15, Sep Preamplifier AM-317A/USM.
TM 11-6625-554-12, Oct Frequency Meter FR-40A/GSM-1.

TM 11-6720-222-20P, Oct Camera Set, Still Picture KS-4A(2).
TM 11-6940-209-20, Sep Radar Trainer AN/ULT-TS.
TM 55-2330-211-10-1, Semitrailer, Low Bed, 15 Ton 4 Wheel, M172.

LUBRICATION ORDERS

LO 5-2410-212-15-1 & -2, Oct Tractor Full Tracked.
LO 5-3895-254-15, Oct Distributor, Bituminous Material.
LO 10-3930-215-20, Jul Forklift, MHE 171.
LO 10-3930-252-12, Oct Truck Lift, Fork, Electric.
LO 10-3930-407-20, Jul Tractor, MT-40, MHE 172.

MISCELLANEOUS

AR 40-61, Oct Med Svc Supply.
AR 95-24, Sep.
AR 711-16, CV, Oct Supply.
AR 735-35, C3, Oct Supply.
AR 742-301, Sep Serviceability of CBR Material.
ASubjSed 1-11, Sep Flight Safety.
ASubjSed 5-627, Aug Crane Shovel Operator.
ASubjSed 55-37, Sep Packaging, Handling, Transporting Dangerous and Special Cargo by Aircraft.
DA Cir 310-71, Sep Mil Pubs.
DA Pam 310-2, C3, Oct Index-Forms.
DA Pam 310-4, Jul, C2, Aug.
DA Pam 310-22, C4, Oct Index.
DA Pam 350-5, Aug Cat of Teaching Aids Slide Sets.
SM 10-C9100-II, Dec Fuels, Lubricants, Oils, Waxes.
TA 50-901, Sep Clothing & Equipment (Peace).
TB ORD 444-24, Sep Shop-Van Semi-trailer M146.
TB 34-9-25, Sep Symbols Ident Fuels & Lubricants used by NATO.

GETTING ENOUGH COPIES?



If your unit's not getting enough copies of PS Magazine every month, be sure your administrative people crank up a new DA Form 12-4. Get down on it the number of copies your unit needs so everybody who uses and maintains equipment gets a chance to read.

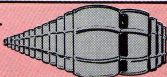


THE FORM 12-4
GOES THRU
CHANNELS
TOO—

U. S. ARMY PUBLICATIONS CENTER
2800 EASTERN BLVD.
MIDDLE RIVER
BALTIMORE, MD. 21220

The Center will mail the magazines direct to your unit . . . via "Pin-Point" distribution.

GENERAL and SUPPLY



RIGHT IS TIGHT

On your M17 field protective mask . . .



Use only inlet-valve cap, FSN 4240-893-3697, with the face-piece that has a bead around the collar



BEAD AROUND COLLAR-
INLET-VALVE CAP
HAS NO LIFTING TAB

OR



Use only inlet-valve cap, FSN 4240-678-0730, with the face-piece that has a collar that is smooth on the outside



SMOOTH COLLAR-
INLET-VALVE CAP
HAS LIFTING TAB

**REMEMBER!! THE INLET-VALVE CAPS
ARE NOT INTERCHANGEABLE. IF YOU
MIX 'EM -- THE MASK MAY LEAK.**

BATHING CHANGE

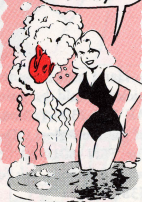
Hold it! Skip the warm, soapy water.

From now on use only a stiff brush dipped in cool, clear water to clean the carrier for your M17 field protective mask.

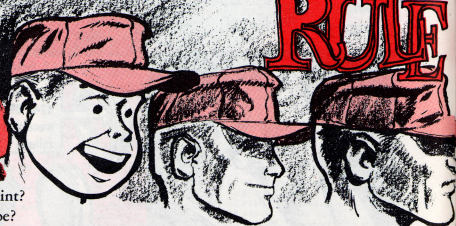
The canvas carrier doesn't take too kindly to the washing treatment recommended in FM 21-15, paragraph 5. The warm water and dipping routine can warp the fibreboard stiffeners in the carrier.

So for now, skip the info in paragraph 29, TM 3-4240-202-15 (Nov 62) when you go to clean this carrier. And, make a cleaning note somewhere handy . . . clean M17 carrier with damp brush and cool, clear water only.

CLEAR
COOL
WATER,
SAM!



RULE



Paint or not to paint?

Lube or not to lube?

These are the questions that you face from time to time when you're trying to take care of your hand tools.

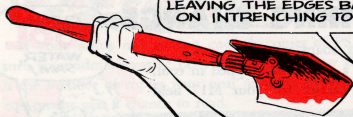
A rule of thumb to follow is this—

Unpainted wooden handles get a real light coat of raw linseed oil, FSN 8010-221-0611 (1 gal). (This is the same linseed oil that you use on the wooden parts of your rifle.) Allow enough time for the oil to soak in and then wipe off the excess. If handles are rough, sand 'em smooth before you oil.

Metal tools get a light coat of Lubricating Oil, general purpose, preservative, special, FSN 9150-231-6689 (1 qt).

HERE ARE SOME EXCEPTIONS TO THE RULE—

Emergency shovels and axes should be painted according to the local fire and safety regulations. You paint your personal intrenching tools with this OD enamel.



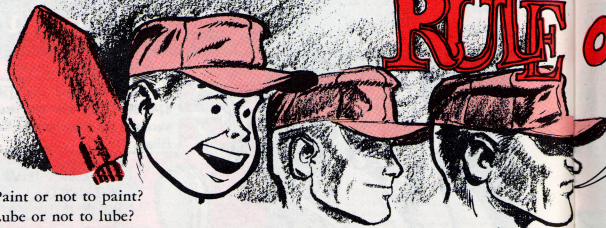
DON'T WORRY ABOUT LEAVING THE EDGES BARE ON INTRENCHING TOOLS.



Hand tools mounted on tactical vehicles should be painted according to AR 746-2300-1. You can get a gallon of the semi-gloss OD enamel by asking for FSN 8010-297-2105. Or, if you want 5 gallons, ask for FSN 8010-577-4381.

If your CO thinks you should camouflage all your outfit's tools, here are some things to bear in mind—

RULE OF THUMB



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WOTCHA DOIN', CUPID, OL' KID?

MAINTAINING MY TOOLS... LUBE FOR THE METAL...

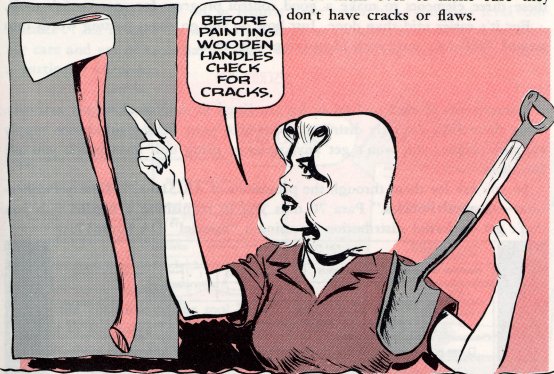
RAW LINSEED OIL FOR THE WOOD.

The serrated jaws and cutting edges should not have paint on them.

Pivots, joint pins, slides and swivels shouldn't have paint on the places that have to be lubed.

Knurled grips shouldn't become paint clogged and smooth so that you can't get a good grip.

Before you paint wooden handles, check them over to make sure they don't have cracks or flaws.



If you know that your tools are going into storage, it's a good idea to spray or soak the wood handles in Insecticide, DDT liquid 5% before you paint or oil 'em. FSN 6840-253-3892 will get you a 5-gallon can of DDT.

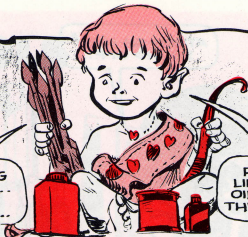


OF THUMB

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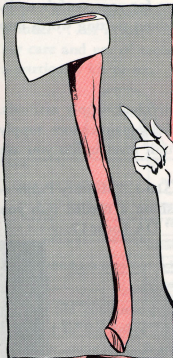
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BEFORE
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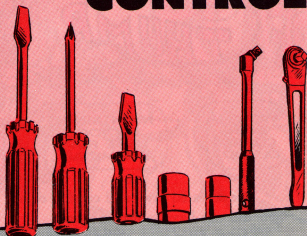


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CONTROL

ATTENN-SH-HUT!
SOUND OFF...



IDENTIFY . . . INVENTORY . . . FIX RESPONSIBILITY. You need at least these three elements to make a good control program for your outfit's tools.

But it's easier said than done. Just how do you go about putting words into action? Well let's start with identifying your tools.

SM'S DESCRIBE 'EM

Components of each tool set or kit are listed in individual supply manuals. Since these SM's are only distributed down to your field maintenance supply support people, you won't get any copies at using unit level unless you ask for them.

So you ask for them through the provisions of AR 310-1, "Military Publications—General Policies." Para 70 tells you to requisition a needed pub you don't get on initial distribution by using a "Special" DA Form 17.

U. S. GOVERNMENT PRINTING OFFICE: 1962-645018

REQUISITION FOR PUBLICATIONS AND BLANK FORMS (AR 310-1)				DATE 7 August 1963	PAGE NO. 1	NO. OF PAGES 1	REQUISITION NUMBER (Assigned by Center or source of supply)
REQUISITIONING AGENCY Your unit				STATION NUMBER			
1. TYPE OF REQUISITION ☐ REGULAR ☒ SPECIAL		3. JUSTIFICATION FOR SPECIAL REQUISITION For special tool inventory to establish tool control program.				2. REQUIRED DATE 21 Aug 63	
3. ITEMS REQUESTED HEREON ARE: ☐ SCHOOL REQUIREMENTS ☐ CLASSIFIED ☐ PUBLICATIONS TO BE PACKED WITH EQUIPMENT ☐ ACCOUNTABLE ☐ SENSITIVE							
4. TO: (Center or source of supply) USA AG Publications Center 1655 Woodson Road St. Louis, Missouri 63114				5. SEND TO: (Complete address) CO Your Unit Post or APO No.			
6. REQUIREMENTS OF REQUISITIONING AGENCY						ACTION TAKEN BY CENTER OR SOURCE OF SUPPLY	
LINE A	NONCLASSIFICATION B	UNIT C	DATE IN D	REQUIRED E	SENT F G H I J K L M N O P Q R S T U V W X Y Z	LINE ITEMS OTHER ACTION (See reverse side for explanation of symbols) D	
1	SM 9-4-4910-A84 (23 Nov 62)			2			
2	SM 9-4-4910-A85 (5 Dec 62)			2			
3	SM 9-4-4910-A86 (13 Feb 63)			2			

ATTEN-SH-HUT!
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CONTROL

YOUR TOOLS



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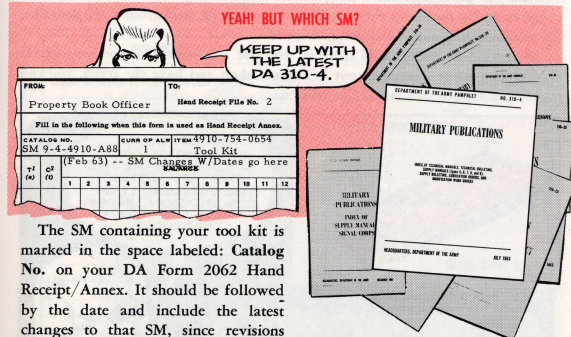
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U.S. GOVERNMENT PRINTING OFFICE: 1960-640018

REQUISITION FOR PUBLICATIONS AND BLANK FORMS (SEE INSTRUCTIONS)		DATE	7 August 1963	UNIT NO.	1	NO. OF PAGES	1	REQUISITION NUMBER (Classified by Center or source of supply)
REQUISITIONING AGENCY		Your Unit		STATION NUMBER				
1. TYPE OF REQUISITION		2. AUTHORIZATION FOR SPECIAL REQUISITION		3. REQUIRED DATE				
☐ REGULAR		☒ SPECIAL		21 Aug 63				
		For special tool inventory to establish tool control program.						
4. TIME REQUISITION REQUIRED		☐ SCHOOL REQUIREMENTS		☐ CLASSIFIED		☐ PUBLICATIONS TO BE PROVIDED WITH EQUIPMENT		☐ ACCOUNTABLE
		☐ SCHOOL REQUIREMENTS		☐ CLASSIFIED		☐ PUBLICATIONS TO BE PROVIDED WITH EQUIPMENT		☐ REMITTANCE
4. TO: (Center or agency of supply)		USA AG Publications Center 1655 Woodson Road St. Louis, Missouri 63114		5. FROM: (Organization, address)		CO Your Unit Post or APO No.		
6. REQUIREMENTS OF PRODUCTION AGENCY		ACTION TAKEN BY CENTER OR SOURCE OF SUPPLY		7. LINE ITEM				
LINE	NO.	REQUISITIONING AGENCY	DATE	DATE IN	DATE IN	DATE IN	DATE IN	DATE IN
1	SM 9-4-4910-A84 (23 Nov 62)							
2	SM 9-4-4910-A85 (5 Dec 62)							
3	SM 9-4-4910-A86 (13 Feb 63)							

For a pub to be "needed," according to para 63a(1) of the same AR, it has to put some responsibility on, or require some action by, a company level commander . . . or involve one of your privileges as a soldier. So anybody responsible for care and use of tools has a "need" to know what the latest SM says about a particular kit or set.

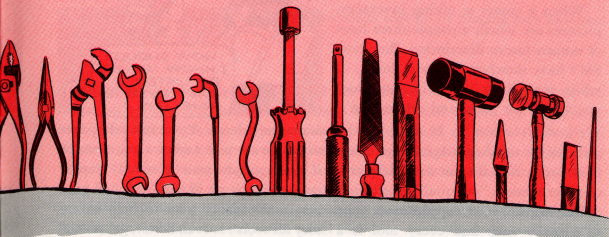


The SM containing your tool kit is marked in the space labeled: Catalog No. on your DA Form 2062 Hand Receipt/Annex. It should be followed by the date and include the latest changes to that SM, since revisions and changes will alter the contents of the original kit listing.

If your supply support doesn't clue you on these changes, you'll be ending up with overages or shortages you don't

even know about. The only way you can do your own checking is to keep up with the latest DA Pam 310 series of SM indexes which are being consolidated in the 310-4.

YOUR TOOLS

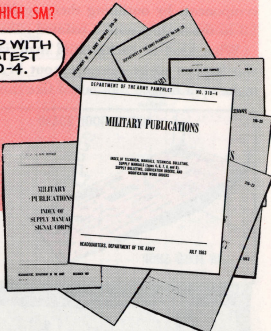


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YEAH! BUT WHICH SM?

KEEP UP WITH THE LATEST DA 310-4.



FROM: Property Book Officer **TO:** Hand Receipt File No. 2

Fill in the following when this form is used as Hand Receipt Annex.

CATALOG NO. SM 9-4-4910-A88	CURR OP ALW 1	ITEM 4910-754-0654	Tool Kit
--------------------------------	------------------	-----------------------	----------

(Feb 63) -- SM Changes W/Dates go here

T/ (a)	C/ (u)	1	2	3	4	5	6	7	8	9	10	11	12
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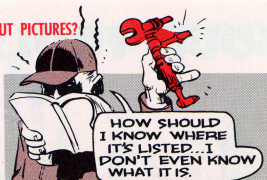
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HOW 'BOUT PICTURES?

When it comes to taking inventory, pictures are worth a couple-three lines of nomenclature description. But some SM's have sketches and some don't . . . while some SM's show the same tool you've got on hand and others don't. Well, don't sweat it. If some of the pictures are missing, ask the man using those tools. And if some look different, consider them as "or equal" substitutes.

Relying on your supply room type to identify each and every tool is a mistake, unless he's also had mainte-



nance experience. You can't add paper to hardware and expect a solution. So if your supply man is strictly supply trained, let it go at that. Haul in your best maintenance man to help inventory all tools . . . even better, get several maintenance people to help.

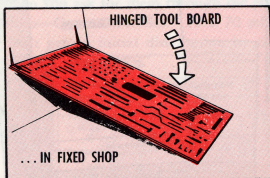


TOOL BOARDS HELP

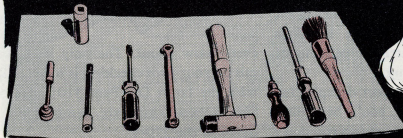


Once you piece together a complete tool kit, make your own pictures of the components by outlining them against a contrasting background. If you like, fill in the outline with a painted silhouette.

What kind of background material you use is a matter of convenience. If you happen to be operating out of a fixed shop and have the room, you can make up a hinged tool board like this one.



YOU CAN DRAW UP A LIST OF ANY SHORTAGES ON THE SPOT BY NOTING THE FSN AND ITEM DESCRIPTION UNDER EACH UNCOVERED DRAWING.



It allows each mechanic to lay out his entire tool kit by placing each tool over its silhouette.

An indoor type, wooden tool board has a certain amount of class from the inspector's viewpoint, but you can't beat a canvas tool spread for all around use. Painting or gluing the same silhouettes on pieces of canvas allows you to store pictures in less space and makes for a lightweight, portable display that can be laid out on a parade ground, company street or bivouac area. Any half-way flat surface will do—indoor or outdoor.

You'll find that even the most inexperienced man in your unit can inventory a complete tool kit accurately with a tool canvas . . . and inspections will go a lot faster, too.

Change 1 to AR 735-35 (Mar 62), "Supply Procedures for TOE Units, Organizations and Non-TOE Activities" says in para 13b(3) that hand receipt annexes will just show quantities of items short, over or both. No more listing a complete kit set or item by item.

[illegible]

If you received a complete kit, the title of the kit is listed as a single item on the hand receipt. No annex is required. But if you're authorized only part of a kit, such as under some TA, then you need an annex to list the exact contents item by item.

When you're supposed to have a complete kit issue, but an inventory shows an overage, the hand receipt holder initials the 2062 to cover the property book officer. And since a shortage would be the responsibility of the hand receipt holder, the **PBO initials** under shortages to show he knew about it when the issue was made. If both overages and shortages show up in the same kit, due to SM additions and deletions, they both go on the same annex.

HAND RECEIPTS FOR MECHANICS?

Para 13a of the same regulation points out that company, battery, troop, platoon, detachment, section, subactivity and unit leaders can issue the property they have already signed for down to smaller units. So, for better control, any platoon leader or section chief can have an individual mechanic sign for a tool kit issued to the platoon leader or section chief by the PBO.

However, the regulations also say that this type of hand receipt issue has to be approved by the property book officer after first going through your own unit commander. That's just so the situation doesn't get out of hand with all kinds of unauthorized paperwork floating around.

COLOR CODE YOUR OWN

When individual mechanics sign for their own, each tool box becomes an individual's responsibility. If each tool box carries a patch of color (paint or tape) matched by each tool in that box, misplaced tools will find their way back to the right tool box easier and quicker.



WHAT'S YOUR IDEA?

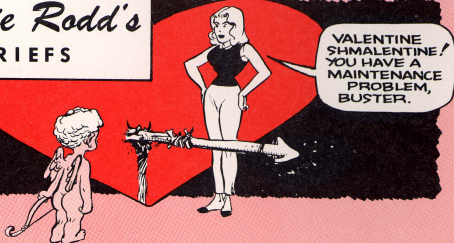
There are a lot more ideas kicking around the field from unit to unit on keeping track of tools. If everybody'd toss their ideas into the same pot, we might be able to brew up a good tool control program at using unit level. Appreciate any thoughts you might have. Write if you get the chance.

Half-Mast

ANY IDEAS?
WRITE US.



Connie Rodd's BRIEFS



ALL AIRCRAFT... REPORT!

Aviation units better grab hold of that new AR 710-12 (17 Dec 63) which supersedes AR 710-1500-8 for preparing your Aircraft Inventory, Status and Flying Time Report. The new system requires daily recording, using a 24-hour day, beginning at 0001 hours 1 Jan 64. You still use DA Form 1352 which is being revised. The AR makes some changes to the form. There are some new definitions, reporting procedures, assignment codes and prescribed aircraft availability rates.

GRIP THIS ONE

Grab on to a new Gripper, Hand Crank, for your M107 and M110 self-propelled artillery jobs with this FSN: 2540-722-3771. The old number, FSN 2540-722-3711, won't fetch it.

WASHIN' CAUTION

When you give your M60, M60A1 or M48A3 tank its Friday night bath, be sure you keep the engine running. That way, if some water gets through the engine compartment doors and into the exhaust system, it's not so likely to give you a hydrostatic lock.

THE KIT & KABOODLE

If your Nike-Hercules site is in a spot where you get more'n a little snow, you might remind your support people that you'd like to have them moisture proof the launcher and launching section winterization kit distribution boxes. The story on doing the winterizing is in TB 9-1440-252-34/30 (17 Sep 63).

LOOK, MA, NO FINGERS!

The cooling fans in the engine compartment of the M108 (T195E1) and M109 (T196E1) SP howitzers have already chopped off the fingers of several soldiers. **Be real careful!** See page 15 of the next issue of PS for more scoop.

U KNOW WHAT

Gotta U-type LO—like maybe the Browning Machine Gun's LO 9-U6 (6 Sep 61)? There'll be no sweat, no fret, about what that "U" stands for if you know about para 53b of AR 310-1. The LO gets a "U" when there's no TM or TB for the equipment—or when no tech pub is planned or it's been issued by a different commodity command (tech service).

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